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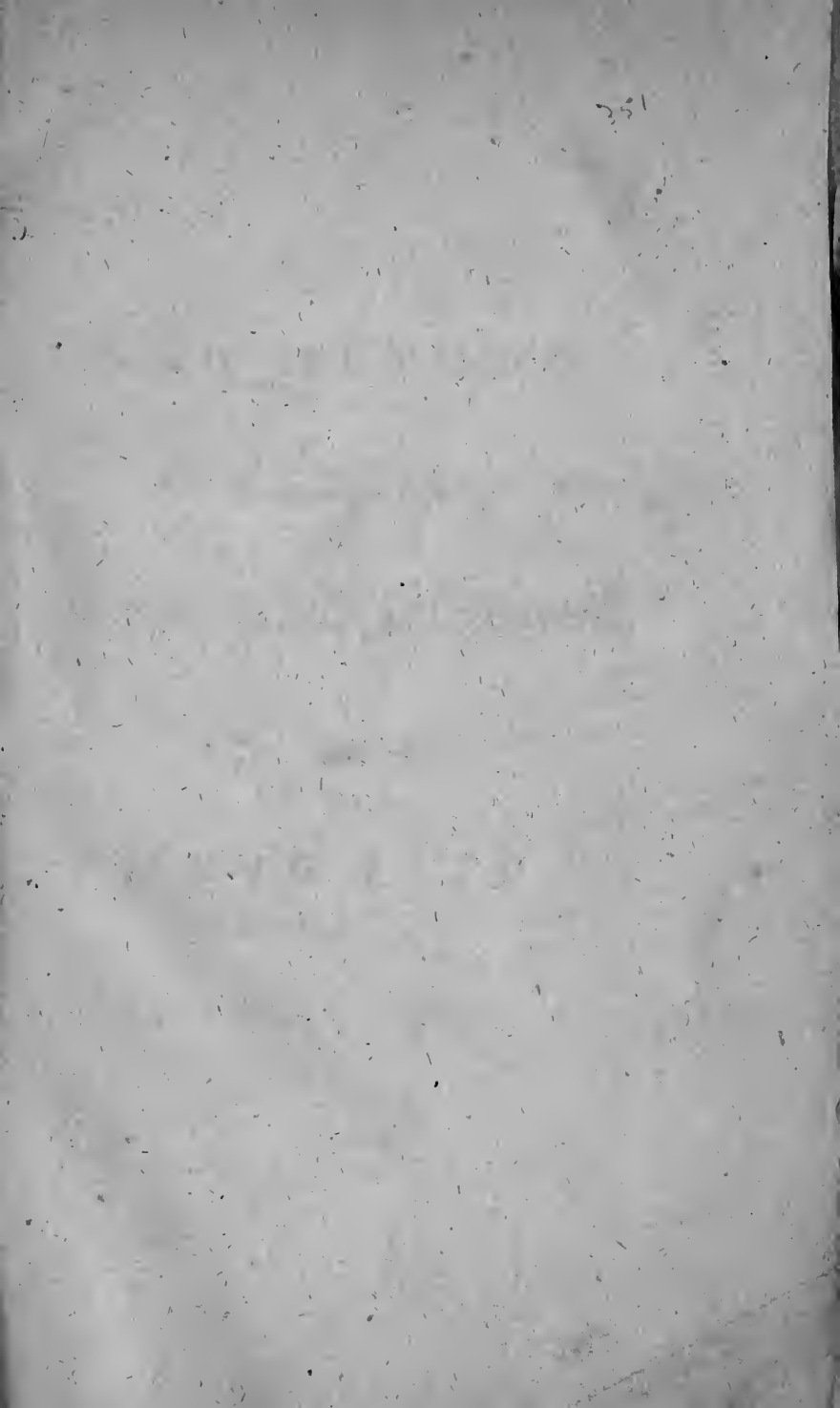
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A new method of curing the venae
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A
NEW METHOD
OF CURING THE
VENEREAL DISEASE
BY
FUMIGATION:
TOGETHER WITH
CRITICAL OBSERVATIONS
ON THE
DIFFERENT METHODS OF CURE;
AND AN ACCOUNT OF
SOME NEW AND USEFUL PREPARATIONS
OF
MERCURY.

351

BY
SIR PETER LALONETTE,
KNIGHT OF THE ROYAL ORDER OF ST. MICHAEL, AND
DOCTOR REGENT OF THE FACULTY OF PHY-
SIC, IN THE UNIVERSITY OF PARIS.

Published at PARIS, by Order of the KING of FRANCE, in
the Year, 1776: and now first Translated into ENGLISH.

With COPPER-PLATES, to illustrate the MACHINES, CHY-
MICAL APPARATUS, &c. described in the Course of the
WORK.

L O N D O N:
PRINTED FOR J. WILKIE, ST. PAUL'S CHURCH-YARD.
M.DCC.LXXVII.



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P R E F A C E.

WE have already so many publications on the Venereal Disease in the English language, that it may, perhaps, be thought superfluous to add the sentiments of a foreign writer, on the subject. But they who are conversant with the publications, that have appeared of late years in this way, will be ready, it is presumed to acknowledge, that the generality of them have been put
out

out merely to recommend an author or a nostrum to the public: Whereas, the following work which appears to have been written on the most laudable motives, will be found to contain many useful and important practical hints, together with many marks of a deep and comprehensive knowledge of chymistry. The author of it who is a man of rank, and who has had a very long and extensive experience in his profession, communicates his discoveries in the most liberal manner and without reserve.

The great commendations that have been given on the Continent to the original, will, it is hoped, recommend this translation of it. The work was published in France at the king's press, and at the expence of govern-

government, and the cure by fumigation is found to be so easy and effectual ; and at the same time, attended with so little expence, that it bids fair to be soon adopted in all the French military hospitals in the room of Keyser's pills, which, for some years past, have been in so much vogue.

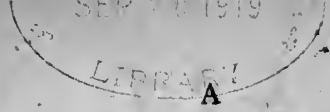
It will be sufficient to add, that the celebrated M. Macquer, who performed the office of censor to this work, speaks of it in the following terms.

“ I have read, by order of the
 “ Lord Keeper of the seals, a manuscript, entitled, *A new Method of*
 “ *curing the Venereal Disease by Fumigation, &c. by the Chevalier de*
 “ *La-*

“ *Lalouette, of the King’s order, and*
 “ *Doct̃or Regent of the faculty of*
 “ *physic at Paris, &c.* And I
 “ think that the publication of this
 “ work cannot fail to be of the great-
 “ est utility, as well on account of
 “ the chymical researches, and in-
 “ quiries it contains on the purifica-
 “ tions and most essential preparati-
 “ ons of mercury, as on account of
 “ the perfection the author has gi-
 “ ven to a method of curing the
 “ Venereal Disease, which claims all
 “ the attention of persons of the pro-
 “ fession. Dated at Paris, the 3d
 “ of December, 1775.”

MACQUER.

A



NEW METHOD OF CURING THE VENEREAL DISEASE

BY
FUMIGATION.

CHAPTER THE FIRST.

PLAN OF THE WORK.

THERE are few diseases, the effects of which are more felt by society than those of the Venereal disease.—The other evils which attack mankind, very often affect only individuals.—This seems to include the species in general—*They* are perhaps only felt at intervals, whereas *this* is every day renewed.—It taints as it were the very source of life, and descends from one generation to another—And what adds to its horrors is, that in

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proportion to its propagation, it disguises its appearance, and eludes all the pursuits of art.---No object seems more worthy than this to fix the attention of government.---To preserve the present generation to the state, and to prepare it a future race which shall be more healthy and vigorous, are the objects of medicine, in the treatment of a disease which attacks men in the vigour of life, and deprives their country of those services, and of those descendants from them, which she had a right to expect.---Diminished population, degeneration of the species, weakness in the state by being deprived of so many subjects.---These are the effects of this cruel disease.

It is not my intention to describe or inquire into the causes, the signs, or the prognostics of the Venereal Disease.---These matters have already sufficiently employed the most celebrated men, amongst whom M. Astruc seems deservedly to hold the first place.---That learned and illustrious physician has described the

the history and character of this disease with so much genius and learning, that I believe it would not be possible for us to extend our knowledge on this subject, beyond the bounds he has marked out.

I mean only to examine the different modes of treatment which have been formerly employed, or which are still in use for the cure of this disease---to observe the effects of each of the remedies that are employed, and after comparing the advantages and inconveniencies of each method ; point out sufficient reasons drawn from experience, for determining us in the choice of that which claims the preference.

C H A P. II.

Of F R I C T I O N S..

PHYSICIANS ran through the two extremes of this mode of treatment before they fixed on any method.

For a long time, they were accustomed to apply the mercurial ointment in very large doses, leaving but very short intervals between the frictions. By these means they designedly excited a long and excessive salivation, which exhausted the strength of the patient, produced ulcerations of the tongue and inside of the cheeks; destroyed the gums, and caused the teeth to fall out. Sometimes, the mercury being determined to the intestines, occasioned almost incurable dysentery.--- To avoid these effects, the mercury was exhibited in smaller doses.---They left greater intervals between the frictions, and

and excited a more moderate salivation. By this method they managed to introduce a greater quantity of mercury into the mass of blood, without occasioning such violent symptoms as were the result of the former one.---They were very properly convinced, that a certain quantity of the remedy was necessary to destroy the virus effectually.

At length, encouraged by the success of this second method, a third was attempted of extreme mildness.---The mercury was applied in very small doses, and by the length of the intervals between the frictions, and by the frequent use of gentle purgatives, salivation was prevented. As to the rest, they exacted but little preparation. The regimen was by no means rigid, and the patient was not debarred going into the air as usual, provided the state of his general health, the climate, and season, seemed to permit it. This last method has been named, *cure by extinction.*

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The violent and fatal effects of the first of these methods, has caused it to be universally proscribed throughout Europe. on the other hand the great convenience of the last, quickly procured it many partisans.---but soon they perceived, that it was by no means so infallible as it was convenient, and altho' it still may have its friends, it will be acknowledged, I believe, that in general they are to be rather met with, amongst those whose interest leads them to flatter the ease of their patients, than amongst those physicians who are jealous of the honour of their art and wish for the destruction of a disease which is so fatal to the human species.

(The generality of physicians, therefore, seem to have fixed themselves to the second method, in which the frictions hold as it were a middle rank between the strong ones which were unnecessarily applied in the first method, and those by extinction.---This second method however is not without its inconveniencies. If
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the patient rubs in the mercury himself, he soon tires, and the friction is incomplete.---If it is an assistant who does this, the same inconvenience may happen.---It often occurs that the texture of the skin prevents the particles of mercury from penetrating through its pores, and the ointment, which keeps them divided, becomes an obstacle to their passage.---Hence it may happen that too little mercury will be introduced into the blood, and there will be always uncertainty as to the quantity that is absorbed, and very often little or no diminution of the symptoms. On the other hand, if the texture of the skin is very loose and the ointment is applied with force, the particles of mercury will be easily absorbed, and will be liable to stimulate the secretory organs, more or less, according to the temperament of the patient, &c.---Even in this method, there will often be excessive salivation, diarrhoea, &c. which will weaken the patient and render it impossible for him to receive the necessary quantity

quantity of the remedy. As we are often obliged to repeat the frictions, after the ointment has been rubbed on every part of the body, the greafe and filth which remain upon the skin, are often an obstacle to the farther admiffion of mercury.---We may add to this, that the patients linen, becoming imbibed with greafe and sweat, incommodes him by its foetid odour, and infects the air he breathes. This inconvenience may be avoided by persons in eafy circumftances, but every body knows that it is unavoidable in hospitals. Befides, as we are all of us in fome degree flaves to cuftom, we are apt very often to reckon on the action of mercury which is perhaps ftill adhering to the furface of the body, or to the linen that covers it.

These are not the only inconveniences. There are other and more powerful ones which depend on the nature of the remedy, and of which we fhall make

make mention hereafter. We must therefore not be surprized if physicians have sought after some other means of administering mercury, by rendering it proper to be taken internally.

C H A P III.

Of MERCURY taken internally.

THE efficacy of Mercury being once known, it was easily conceived that it might be possible to introduce it into the mass of blood through the primæ viæ. This system gave rise to all the various preparations which have been at different times introduced into use, such as *calomel*, *panaceas*, different kinds of *æthiops*, *cinnabar*, and various *precipitates*, &c. but it was soon acknowledged by the more discerning, that all these remedies being almost wholly insoluble, acted chiefly on the organs of digestion, so that commonly, only a very small portion of them passed into the mass of blood. Sometimes indeed it happened, that by a particular disposition of the absorbing vessels, or by the assistance of a more abundant

abundant fluid too much of them was taken up, and thus occasioned swelling of the glands, erosions of the mouth and tongue, and very often, salivations which were difficult to be stopped. If on the other hand, these medicines remained too long in the stomach or intestines, they produced disagreeable accidents; such as nausea, vomiting, colic, diarrhœa, dysentery, erosions, and even ulcerations, throughout the whole intestinal canal.

Some physicians, with the hopes of introducing this remedy more easily into the mass of blood, gave a solution of Mercury in the nitrous acid, in very small doses of a few drops, in some proper vehicle. They gradually increased the dose, until the salivation began to take place, and then they went back, and gradually diminished it, till all the symptoms disappeared. I have seen this remedy used both in Germany and at Paris, but the horrid accidents it gave rise to, soon caused it to be abandoned. The corrosive sublimate, as dangerous, perhaps, as all the other reme-

dies of this class, was likewise brought into use. The facility with which it was taken, and some few cures effected by it in skilful hands, soon gave it reputation, to the misfortune of humanity. The learned Boerhaave had mentioned this poison, as a powerful remedy, which might succeed in some desperate diseases. He recommended it, indeed, to be directed only by the hands of experienced and prudent physicians; but he ought surely to have foreseen, that it would not fail to be administered by the rash and the ignorant. M. Astruc could not refrain from blaming that great man for having thus brought, as it were, to light, a remedy of this nature, which he compares to putting a weapon of death into the hands of a madman. The same Astruc has observed, that the dose we are able to give of this remedy, contains so small a portion of Mercury, that there does not seem to be any probability of its being able to destroy the Venereal virus. He might have added to this, that it is not from the proportion of Mercury that enters into the sublimate, that

that its action in the Venereal Disease, is to be explained. Is it then, to be ascribed to the marine acid with which it is united? but this has no specific property against the virus. We must therefore conclude, that the substance which results from the combination of these two, acts neither as Mercury, nor as marine acid, but as a composition of those two bodies. It is exceedingly acrid to the taste. The Mercury is not at liberty in this composition: it has lost its moveable property, and, however much we dilute the corrosive sublimate, the Mercury still continues to be inseparable from the marine acid, and constantly preserves its character of astringency and corrosiveness.

What baneful effects, then, may we not expect from such a remedy, when insinuated into the minute capillary vessels, to which it may be supposed to attach itself, and exercise upon these the same effects which it would produce upon the more solid parts of the system; if applied in greater quantity.

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The corrosive sublimate is so caustic, that if applied to the flesh, the glands, or the bones, it occasions an eschar, and destroys their organization. If it is dissolved in a small quantity of water, it produces the same effects, though more slowly. If the solution is more diluted, it becomes; indeed, less corrosive; but it is always too much so, for parts that possess great delicacy and sensibility.

We may deduce the effects of this remedy used internally, from those which we see it produce, when applied to the fungous flesh of wounds. If we wash them with this solution, they become pale, and the suppuration that follows, is sanious. A slight eschar is soon formed on the part, which, after a day or two, falls off, and thus, by repeating the application of the sublimate, we at length reach the sound and firm flesh. The skin around the wound advances gradually, and when the fungous flesh is completely removed, the cicatrix approaches insensibly towards the center. This proves to us, that this
remedy.

remedy, although diluted, has the property of destroying slowly, soft and insensible parts; to produce on them a kind of eschar; to diminish the diameter of their vessels; to push out of them the fluid which circulates through them; and at length to obliterate them, so that they become altogether closed. It acts therefore as a desiccative; if it be dissolved in a spirituous liquor, it will be still more so.

What is thus effected externally, is the picture of what is going on within. Ought we then to be surprized if the sublimate when received into the stomach, should so irritate and stimulate its delicate and sensible membranes, as to injure its functions, and occasion nausea, vomitings, violent colics, and sometimes even convulsions. We may say more than this: we may add, that so far from resolving the inspissated lymph it will produce a contrary effect, by tending to condense it still more, and thus occasioning effects, very opposite to the intentions of the physician. All this is proved by the easiest experiments, If we add
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only a weak solution of the sublimite to the lymphatic part of the blood, and expose it to the degree of animal heat, it will very quickly condense and coagulate. The dangers resulting from this remedy, seem to be much greater than physicians have been aware of. I have had occasion to see a great number of patients who had used it with great precaution, and yet were attacked with nausea, colics in the epigastric region, and sometimes through the whole abdomen. The Venereal symptoms had perhaps disappeared, but the patients were languid; their appetite was depraved; they had nausea, great difficulty of digestion, a slow fever, and constantly complained of pains about the stomach:---sometimes a violent diarrhœa, and at others, a loathing of all food, together with vomiting, continued for two or three days. At length, in some cases, there came on an almost total retention of the aliment, occasioned by the resistance of the pylorus.

I have opened the bodies of several who died in this way, and I have in some, found the pylorus so contracted, that it would hardly admit a common probe; it appeared like an eschar; and this sometimes extended to the duodenum, which was affected in the like manner. I have sometimes found the mesentery and mesocolon indurated and thickened, and even the coats of the intestines themselves so imbibed by this caustic liquor, that I was able to remove them with great ease, as it were, by layers. The pancreas was hard, schirrous, and in some degree, friable: in others who had died consumptive after taking the sublimite, I have found the lungs hard and schirrous, with all the bronchial glands, tumefied and hardened, and the internal surface of the lungs covered with a purulent sanies. The glands of the mesentery, the axillary glands, and those which accompany the jugular veins, were likewise enlarged, and extremely hard.

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There are certain cases, however, in which I will acknowledge that this solution, used with great discretion, may prove salutary; as in the Venereal Disease, for example, when complicated with scorbutic diathesis, or with the rickets. But in general, I am convinced, that it ought to be banished from the medicine, at least, of this climate.

It is possible, that in cold and damp countries, that abound with woods and marshes, where the air that the inhabitants breathe, tends to produce a general relaxation, this remedy may be of some utility, not only in Venereal complaints, but likewise in scurvy, which we know is often complicated with it. It is certain, on the contrary, that in our climates, where the air is more sharp and dry, and its temperature less cold and humid, our bodies are of course more sensible and elastic; and therefore, in general, do not admit of so irritating a remedy, without being violently affected by it.

Diseases

Diseases of the breast were never so frequent as since the use of corrosive sublimate has been introduced. The quacks have employed it with temerity, and have united it with different ingredients, in order to disguise its nature---but the disorders it has produced in their hands, have not been the less fatal.

To avoid therefore these dangers, I have prepared a mercurial liquor which I will describe hereafter; It enjoys all the advantages of corrosive sublimate, without being liable to any of its inconveniencies.---I will prove the truth of this, by exposing its analysis, and relating the happy effects it constantly produces.

I shall say but little of Keyser's pills which have been so much in vogue, not only at Paris, but in the provinces and military hospitals.---Almost every body is now able to judge of their success. It is certain that they have operated cures

in the first and second stages of the Venereal disease, but in cases of inveterate pox they have been usually of no efficacy. When given with circumspection, they have occasioned but few accidents. But the indiscretion of patients, to whom they have been too often intrusted, and who took them as they themselves thought proper, or the imprudence of those who administered them, have produced very alarming symptoms; such as vomitings, depraved appetite, loss of flesh; and sometimes, spitting of blood, salivation, long and obstinate diarrhoea, and at length consumption.

If we consider the nature of this remedy, we shall see clearly that it results from a combination of the acetous acid with mercury. This salt is indeed less caustic than corrosive sublimate, but still it is sufficiently so to produce all the effects which are often justly ascribed to it.

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We will then repeat once more what we before asserted, that in whatever way we administer mercury internally, we can never be assured of its introducing itself into the mass of blood, nor of its distributing itself to all the parts of the body. If it is dissolved in any mineral acid, its first action will be on the organs of digestion, and by its corrosive property, it will be enabled to irritate the orifices of all the minute vessels which open into the intestinal canal. We know that it is the function of those orifices, to absorb from the alimentary mass, the juices proper for nutrition. Of course, if these minute orifices are too much constricted, as they will necessarily be, much less juice will pass into the mass of blood.—The body will therefore waste. Besides, the corrosive quality of these solutions will destroy the organs of digestion, or at least vitiate their organization. If any portion of them is carried with the nutritious juices into the system, the accidents, we have already spoken of, will follow. If the mercury is
given

given in a saline form, it can act only in proportion as it is dissolved, and in that case it will produce the same phenomena. But as in this form it is very difficult of solution, the greater part of it will be carried off with the fœces, and in its passage will irritate the fibres of the intestinal canal so as to become purgative.--- Its least evil will therefore be to purge, tho' this will be contrary to the intention of the physician, and it will therefore not fulfil the intention with which it was prescribed. And yet these remedies, such as I have described them, are in the hands of the credulous public, in a thousand forms and under a thousand different names; and as they are not absolutely destitute of efficacy, they very often give the appearance of a cure, and thus occasion the most baneful evils to society. The secrecy and facility they afford, embolden young people to encounter a disease which formerly appeared more dreadful, when the method of treatment was different and more tedious. The palliation of the symptoms too, does not fail to spread

a false appearance of security over a multitude of dangers and diseases, which every day occasion the degeneration of the human race. A very alarming proof of the insufficiency of the ordinary methods of cure in Venereal cases. An insufficiency, which an extensive practice, during thirty-five years, has very fully convinced me of. But before we attempt to delineate these unhappy effects, I believe it will be right to say something concerning the progress of the Venereal virus, before it has been attacked by any remedy.

CHAP.

C H A P. IV.

*Of the Progress of the Venereal Virus, and
of its Effects.*

THE Venereal virus shews itself differently in different temperaments. In some it attacks the skin, and occasions blotches there. In others it attacks the glands, and sometimes only the bones. In some subjects the glands and the skin are both affected at the same time, in others, the glands and the bones: and in many, I have observed all these diseased at once.

The symptoms which characterize the second and third stages of the pox, usually do not shew themselves till after the first symptoms have disappeared; such as gonorrhœa, chancres, buboes, warts, &c. The first effects of the disease when badly
cured,

cured, by the use of topics, and without a sufficient quantity of mercury's having been employed, will be to infect the lymph with virulence, and this, by being more inspissated, will form obstructions, in the glands, in the periosteum, and even in the bony canals.

The Venereal virus is capable of being communicated only by the pores of the skin. In whatever way the disease is contracted, it must necessarily be by an emission of the miasmata which pass from an impure to a healthy body by immediate contact. The virus insinuating itself thro' the pores, passes on to the cellular membrane, and thus mixes itself at length with the whole mass of blood.----It is during its residence in the cellular membrane, that it occasions chancres, warts, condylomata, &c. It then affects the fat around the inguinal glands, and occasions buboes. Having at length infected the mass of blood, it produces affections of the viscera, and other alarming symptoms. As the virus does not penetrate into the sys-

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tem till it has sojourned a longer or shorter time in the cellular texture, it is natural to believe that the remedy destined to destroy it, ought to be introduced in the same way.

Whatever method is adopted in the treatment of this disease, there is usually much difficulty to remove entirely all the symptoms. I have often had the care of patients who had been repeatedly salivated, and concluding, that the quantity of mercury they had taken, was insufficient for the cure. I have kept them, during three, four, and even five months, to the use of frictions, without being able to cure the diseased glands or bones. I have seen others, to whom frictions were so fruitless, that the disorder increased even during the time they were continued.

In such circumstances I have employed fumigations with the greatest success. My expectations from them have never been deceived. I have always seen the
pains

pains mitigated, the other symptoms insensibly diminish, the appetite, sleep and strength revived; and the patients restored to their original health.

If by chance amongst the common people, some few have not been cured, it has been, because, as happens in every other method, they quitted too soon the use of a remedy, which gave them considerable relief. The symptoms having disappeared, they concluded they were cured.

It is therefore of the greatest importance to eradicate, as much as is possible, the Venereal virus, and to prevent its propagation, as being the only means of preserving those of the present race, who by having this taint still lurking in them, not only have their days shortened, and are variously affected by obstructions of the viscera and many other infirmities, but give life perhaps to a diseased and degenerated progeny. It is only by attack-

ing this vice at its very source, that we can hope to destroy its influence.---If we only palliate its effects, by the remedies we have spoken of, we change the character of the disease and soon see it give rise to a train of evils which we shall enumerate in the following chapter.

CHAP.

C H A P. V.

Of the accidents that are produced by a badly cured, or degenerated Lues.

THE pernicious remedies we have spoken of, occasion two great inconveniencies. They do not succeed in destroying the Venereal virus, but they are the source of disorders in the whole animal oeconomy, which in many cases do not manifest themselves till after a long space of time. It seems to be peculiar to the *precipitates* of mercury to leave behind them, pains of the stomach and bowels, which often continue during life. The corrosive sublimate and other remedies of the same nature, when they have not made violent impressions on the intestinal canal, and have been carried into the circulation, commonly leave intolerable head-achs, pains in the head and limbs, stiffness of the joints, and weakness,

ness of all the muscles. These ills, however, are not the only ones. When the Venereal virus is badly extinguished, and as it were transformed, it assumes another character than its natural one, and becomes so difficult to be distinguished, that the most experienced physician is often deceived by it. It is then that the pains of the head, limbs and joints are considered as rheumatic or arthritic, whereas they are purely the effects of the remedies we have spoken of, on the membranous system. Eruptions on the skin, considered as herpes; languor, syncope, spasms and other infirmities arising from depraved sensibility; schirrous tumours, ulcers; and in women, profuse fluor albus; all these, have the same origin.

The Venereal virus easily changes its character after the attack of acute diseases: The remedies proper to cure these not having destroyed the Venereal principle which rendered them more dangerous, the recovery is therefore often very
tedi-

tedious. The patient wants appetite, is deprived of sleep, becomes languid, &c. and hence obstructions in the viscera, &c. How many tertian, quartan and anomalous intermittents have obstructions in the liver or spleen for the proximate cause, and the Venereal virus for the remote cause of the disease.

The inconvenience is nearly the same whether the latent cause of these disorders continues unknown, or whether its existence is suspected: for in this last case, recourse is usually had to mercury, which as it is commonly administered, will be almost always inefficacious, so that according to either hypothesis, the feeble remains of life which the patients continue to enjoy, will be likely to become baneful to society. The disease will be perpetuated: the succeeding generation will be empoisoned at its very source, and the children produced from these subjects will be liable to anchyloses, exostoses, rickets, scrophula, serpiginous eruptions, scorbutic acrimony, &c.

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This is a true picture, tho' not a very copious one, of the effects of these remedies. Other physicians have, without doubt, had occasion to notice them. They have, perhaps, struck me more forcibly.

During the course of a very long practice I have had occasion to observe almost all the diseases which a vitiated state of the lymph is capable of producing not only in children, but even in adults. I have remarked, that sometimes it occasions affections of the viscera which being once interrupted or weakened in their functions, add to the original cause of all these symptoms. In others, I have seen it attacking chiefly the glands and enlarging their volume, becoming inspissated at the same time within the cavity of these organs, and thus occasioning tumours of various bulk. It is in these glandulous diseases that I think I have more particularly discovered the degeneration of the Venereal virus. With a view to obviate all these ill effects from improper treatment, I was led to seek
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for a method different from the ordinary remedies which seemed to me to be the causes of all these ravages.

The method of cure by fumigation seemed to be susceptible of many conveniencies ; but it was necessary to obviate some of the effects which had occasioned it to be proscribed. It was therefore to this object that I directed my attention. I laboured to render this mode of cure, of equal, and even of greater efficacy, than that by frictions. I aimed at correcting the defects of mercury, by submitting it to a new process, and by the manner of administering it ; and a continued series of success for more than thirty years past, enables me to assert with confidence, that I have attained the desired end. But before I describe my own method of fumigation, it will be right to speak of that of the ancients.

C H A P. VI.

Of the Fumigations practised by the Ancients.

SINCE the first appearance of the Venereal disease in Europe, where it has made so rapid a progress, the most ingenious physicians of every nation have assiduously employed themselves in investigating the different methods which might be likely to destroy this pernicious contagion. At first they were led to employ decoctions of guaicum, and of other sudorific woods, which the American islands from whence the disease seems to have been imported, furnished them with. Experience, however, soon convinced them that these methods were insufficient, and they were then led to use mercury externally. Some of them administered it in the form of pomatum; other

others employed it in the way of vapor, burning the matter in which it was contained, and occasionally mixing it with other ingredients. As the symptoms of the disease usually appeared externally, they employed in fumigations (reasoning from analogy on what they observed in the itch) all the then known preparations of mercury. They likewise used resins, gum resins, and odoriferous woods; and to these they occasionally added orpiment, cinnabar, and sometimes corrosive sublimate. Of these remedies, some were dangerous and others insufficient. Every body knows that the vapor of resins and odoriferous woods is by no means capable of operating a cure in this, altho' it may be very salutary in other diseases. These matters then ought to be rejected, as altogether useless in the treatment of the Venereal disease by fumigations.

It is likewise known, that mercury is the sole specific in these cases, and if the ancient fumigations have sometimes cured, it was, perhaps, merely from the mer-

cury which entered into their composition.

Their manner of administering them must have been dangerous. The patient was exposed naked, under a kind of tent which covered him entirely. He stood upright and had a pan filled with burning coals placed between his legs, upon which the powder was thrown, or cakes composed of the preparations I have been speaking of. He continued exposed to this vapor half an hour, three quarters of an hour, and sometimes an hour, until his whole body was covered with a copious sweat; and as it sometimes happened that the patient was near being suffocated, a little opening was made in the tent, thro' which he was able to breathe a fresh air. When this operation was finished, he was conducted to a warm bed, and after having drank some wine, was made to sweat during one or two hours. This method was repeated, with the same forms, every two, three or four days, according as the strength of the patient would

would permit; and was continued until all the symptoms of the disease disappeared.

There were others who administered fumigations in a different way, by directing the vapor into the bed of the patient. They did this by means of a tube, the large end of which in form of a funnel, being placed upon a furnace, received the fumigating vapor, which was conducted into the patients bed by the other extremity of the tube. There were some indeed who did not hesitate, to make their patients immediately respire these vapors by the mouth, by means of a funnel.

Some physicians, encouraged by their success, devoted themselves to fumigations, and cured some inveterate poxes by these means, when they had resisted every other method. It is therefore not strange that this method should have

have been practised and adopted by the most celebrated physicians. Even they who are the most attached to frictions, are unanimous in agreeing, that recourse must sometimes be had to fumigation when the disease is obstinate, and will not yield to other methods. Fumigations may therefore, according to their opinion, be useful, even in the way they were administered formerly, and which was liable to many inconveniencies.

The drugs, that were employed in these operations, were usually formidable poisons, which, when thrown upon the fire, diffused an arsenical, corrosive or sulphureous vapor, and this when received into the lungs, could not fail to produce the most baneful effects. It is not therefore to be wondered at, that palsy, pains in the bowels, and sometimes death, should have been the consequence.

This method had been given up, as it were, for near fourscore years, when a quack

quack fumigator of the name of *Charbonniere* came to Paris, and made himself known by some pretended cures in the following way. He covered the patients head, and made him breathe the fumes of some matter which he threw upon the coals. This seemed to be cinnabar, from its red colour, the sulphureous odor it diffused, and the suffocation it excited.

This fumigation, tho' less dangerous than former ones, occasioned, however, considerable accidents: The sulphur combined with mercury, did indeed in burning, set a portion of the mercury at liberty, but the quantity that passed in thro' the mouth and nose; was by no means capable of destroying the virus; and the small number of fumigations he employed was very insufficient for the cure of the disease, when inveterate. Indeed, the proofs that *Charbonniere* gave of his method, at the Invalids and other hospitals, succeeded so badly, that both the fumigation and the fumigator soon returned again into oblivion.

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We therefore are able to discover the reasons that induced physicians, to abandon a method of cure, which altho' it sometimes succeeded in very obstinate cases, was yet a very dangerous one in general; usually throwing the patient into the most deplorable state, and sometimes causing him to perish.

C H A P. VII.

Of the new Fumigation.

AFTER having, in a long course of practice, observed the effects of the several remedies employed in the cure of the venereal disease, together with the variations and vicissitudes which occur in its symptoms, I decided in favor of fumigation, as being the most certainly efficacious.

We have already seen, that the ancients employed perfumes, in the form of vapor, in the cure of many diseases. The term *fumigation* is therefore not a new one. We observed too that when mercury was first known to be the true specific in the Venereal disease, it was combined with the perfumes and other substances that were already in use. This practice, tho'

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exceedingly deficient in many things, and on that account proscribed and abandoned, seemed to me to be capable of correction, and even of becoming the best and most efficacious, by obviating the dangerous effects of the remedy and administering it in a different way.

No body has hitherto described the fumigation I propose, and which I have not presumed to offer to the public, until a practice of more than thirty years, (during which I have employed it successfully in more than four hundred cases, which neither myself nor others were able to cure by the ordinary methods) enables me to speak of it with confidence.

Amongst the great variety of patients who have been occasionally under my care, I have as yet seen no disagreeable accident from this mode of treatment, and I have constantly observed, that so far from being rendered weaker by it, they have apparently gathered strength during the use of the remedy, and the
symptoms

symptoms have insensibly diminished, till at length they have entirely disappeared.

As I gave them no internal remedies during the course, the dejections were not disturbed, and the body was repaired, in proportion as the effects of the disease diminished. The patients were not exhausted by any forced evacuations, such as diarrhoea and salivation; and I was able to continue the mercury with perfect security, in as great a quantity as was necessary to extirpate the virus effectually.

This method has many advantages.

1st. We avoid injuring the stomach by internal remedies.

2dly. We are enabled in this way to administer a greater quantity of mercury, without causing any disorder in the animal œconomy, and the insensible effects it produces, serve to re-establish all the functions in their original state.

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3dly.

3dly. This remedy which may be considered as producing the effects of a general friction applied to the whole body at once; leaves no sensible marks on the skin of its having been applied: and the mercury reduced into vapor by the action of the fire, is so divided, that it is easily able to pass through the pores, and thus is introduced into the mass of blood.

4thly. When managed with prudence, it very rarely excites either salivation or diarrhoea; sometimes, indeed, the mouth becomes a little sore, the gums swell, and the belly is more open; a proof that the mercury has passed into the system. In interrupting the operation, however, only during a few days, these little inconveniencies soon disappear.

5thly. The mercury reduced to a vapor which surrounds the whole body, diffuses but very little odor.

6thly.

6thly. The patient remains exposed to this mercurial vapor, only during twelve or fifteen minutes, after which he puts on his cloaths, and goes about his ordinary business, unless prevented by some local disease. His skin does not afford the least visible trace of the remedy he has been using.

7thly. The regimen he adheres to is simple ; mild food, little wine, no spiritous liquors; &c.

8thly. If, during the treatment, it is found necessary to purge the patient, this is done by a common purge.

9thly. This fumigation is usually applied every other day; sometimes two days together; now and then we have an interval of two days between each operation; but in cases that require it, it may be used three and even four days together.

10thly.

10thly. This fumigation may be applied in the morning fasting, and the patient may breakfast an hour or two after it.

11thly. It will be right for the patient to take some exercise after it, and to go into the air, if the weather will permit.

12thly. We are certain, that the patient receives, each time, the quantity of mercury we give him, and that it is constantly applied to the whole surface of the body.

In this method, simple as it may seem to be, the remedy neither can, nor ought to be administered, but by skilful persons of the profession, who may know how to vary the use of it, according to the difference of circumstances.

The operations and dressings which may be necessary during the cure, must be submitted to the care of the surgeon as in the

the cure by frictions or any other method.

It will be inquired perhaps what quantity of mercury ought to be employed in fumigation. This question may be asked in every other mode of treatment. We know that in the cure by frictions the dose is proportioned to the violence of the symptoms, the strength and temperament of the patient, &c.—The same thing may be said of fumigation. We know that in general, four, five, or six ounces of ointment, containing half its weight of mercury, are sufficient for the ordinary treatment, and that there are some cases in which twice that quantity will be insufficient. Supposing then that at each friction we apply two drams of the ointment, twenty or five and twenty frictions will be required: and in common cases I find that the same number of fumigations will suffice. But does all the mercury contained in the ointment enter at each friction? No: much of it remains on the surface

surface of the skin, and much of it on the hands of the assistant who rubs it in. The linen of the patient proves too that all the ointment has not entered. The same thing happens in fumigation; all the mercurial vapor does not enter the pores of the skin; and we are therefore not to be surprized if it is necessary to repeat the fumigation in some cases even thirty and forty times. Some of the remedy is lost in throwing the powder on the fire, much of the mercurial vapor attaches itself to the fumigating box, and is of course not applied to the body. Another part is evaporated. We are therefore not able to say with precision how much mercury is introduced; and as in the case of frictions, it is from observation and experience alone, that we can be able to determine the dose proper to be applied in each fumigation, and how often it will be proper to repeat it. It will be prudent at any rate to continue it, till all the symptoms have disappeared, and even afterwards for the sake of greater security.

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This rule may be applied to every method, but whatever mode of cure may be adopted, it is of great consequence that the mercury employed be of the greatest purity.

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C H A P.

C H A P VIII.

Of the Metallic Substances that are found united with Mercury, and which are foreign to its Nature.

MANY of the mischievous effects which follow the use of mercury, are less due to that metal than to the foreign metallic substances with which it is united. The mercury that is sold in shops is generally exceedingly impure. It has very often been previously employed in the arts, and is sometimes combined with lead, tin or bismuth. Such kind of mercury altho' distilled, brings over with it some portion or principle of the metals with which it has been combined, and on which depend the properties it acquires in different amalgamas. I suppose nothing here, I am speaking from experiments.

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If you dissolve half an ounce of tin in four ounces of mercury, and then strain it thro' shamoy leather. The mercury will not seem to contain any foreign substance. And if instead of tin you use a like quantity of bismuth or lead, the event will be the same; the eye will not be able to discover any impurity. This similarity of appearance would be liable to deceive us, if chymistry did not enable us to ascertain the characters of the different metallic substances that are occasionally combined with mercury.

Take, for example, half an ounce of the mercury that is united with tin, and place it over a brisk fire in an iron spoon, so as to make the spoon red hot; as the mercury evaporates, it will occasion, at first, very slight crepitations, which will increase as the evaporation advances, and will at length terminate by a decrepitation similar to that which takes place when we throw common salt on red hot coals. The same thing will happen if we use the mercury combined with lead or bismuth.

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This experiment will serve to discover the metallic substances with which mercury is adulterated, for if half an ounce of the mercury, I shall describe in the course of the work, is submitted to evaporation in the same way, there will not be the slightest crepitation.

If we distil the mercury that is combined with the tin, or with the lead, the decrepitation, which was perceived when the evaporation was performed over the open fire, will not take place. A proof that the presence of the air is necessary to this phenomenon: for each of these mercuries, tho' distilled, will crepitate, if evaporated over the fire, as in the former operation, but with less force than they would have done before they were distilled. Consequently, distillation is not the most certain way of depriving mercury of the foreign substances which it volatilises and appropriates to itself in a singular manner.

If

If we depended wholly on distillation for the purity of mercury, we could by no means be sure of having it free from metallic particles; and cinnabar, made with such mercury, would not be so pure as we might imagine: for these particles, being intimately united to the mercury, and sublimed with the sulphur, are not easily detached by this process. The vitriolic acid, saturated as it is with the principle of phlogiston, has not the property of completely dissolving mercury: it forms a chrySTALLIZATION, in *spiculæ*, which still indicates the true character of the chrySTALLIZATION of sulphur. The mercury is seen extending over these *spiculæ*, and gives the appearance of silver streaks through the whole length of the chrySTALS of cinnabar.

We know that arsenic is exceedingly volatile, and that mercury is of a nature not less so. It seems likely, therefore, that in distillation it may bring over with it some particles of arsenic from the bismuth or tin. Bismuth constantly contains some
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portion of arsenic, and there are some tin ores which contain it also. It would therefore not be strange if the mercury, being united with this principle, should ascend with it, in sublimation with the sulphur, to form cinnabar. So that we can never be well assured of its purity: because besides its having been used in the arts, it is often mineralized with arsenic and sulphur in the bowels of the earth, and simple revivification has not been able to deprive it of this principle. It is for this reason that the most experienced physicians, who have observed the dangerous effects produced sometimes by the internal use of natural cinnabar, have recommended the employing only the factitious, as being more certainly deprived of all arsenical or foreign substances. From all which it follows, that mercury revivified from cinnabar, altho' it has constantly been regarded as the purest, may, however in some measure participate of the nature of the substances with which it was associated, and, consequently, that for internal use, and the greater

greater safety of the patient, we ought only to use cinnabar prepared in the way we shall describe.

It is to these metallic substances that we are to attribute the accidents which follow the use of mercury, and which the ancients attributed to the cold qualities of this semi metal.

The workmen who are employed in gilding, and other arts to which mercury is useful, are often attacked with tremors, nervous pains, colic and even palsy. These effects are not owing to the mercury alone, but to the other metallic substances which are mixed with it. Lead, tin or bismuth, when united with mercury, do in part pass through shamoy leather with it, and in that case the mercury appears to be somewhat less fluid. These substances, therefore, diminish the natural mobility of mercury, and passing with it through the pores, fix themselves on parts of a solid and compact texture, such as the membranes, aponeuroses, tendons,

dons, nerves, &c. whence arise the symptoms we have mentioned.

These are not the only instances of the insufficiency of distillations, revivifications and triturations to purge mercury completely of all the heterogeneous substances it may have appropriated to itself. I see a new proof of this in the operation of precipitate *per se*, improperly called *precipitate*, being simply a mercurial calx; for if we triturate mercury a long time, either with the regulus of iron, the regulus of tin, the regulus of arsenic, or the regulus of copper; the matters being kept in the same degree of heat the whole time, and then distilled: These different mercuries being put into separate long necked matrafes of an oval form, hermetically sealed, and kept for a long time in nearly a boiling heat, will assume a red colour, which will vary sensibly, according to the greater or less intensity and quickness of the calcination. The red colour seems to be inherent to mercury; for if sublimed with sulphur, it becomes red; if united
with

with the nitrous acid, and we raise the fire, it reddens; if, when combined with the muriatic acid, we precipitate it with fixed alkali, the precipitate is of a red colour; and mercury exposed to heat without any addition, likewise becomes red. Mercury, therefore, seems to include within itself the red colouring principle. The brightness of this red colour will be in proportion to the purity of the mercury, and is, therefore, one of the characters by which it may be ascertained. Mercury treated in the way we shall describe, assumes this bright colour in calcination.

Mercury, like all other metallic substances, is deprived of its metallic lustre by calcination. It is no longer capable of uniting with the metals, and whitens neither gold nor copper. Thrown upon burning coals, very little of it rises, and that which does arise, preserves, in a great measure, its colour; which attaches itself to the body, and the skin being

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rubbed

rubbed with a piece of gold, affords no marks of mercury.

This degree of heat is therefore not sufficient to revivify it, and to restore to it all the properties it lost by calcination. To give it its first form, it would be necessary to expose it to a very violent heat, so that the vapor might surround it on all sides. The red precipitate, (improperly called precipitate,) being thrown upon coals, rises a little, and exhales a nitrous vapour which is very hurtful to the breast.

Mercury dissolved in the nitrous acid, and precipitated by a solution of common salt, or by the muriatic acid, forms a mercurial salt, which has been improperly named precipitate, as it differs in nothing from corrosive sublimate. This mercurial salt cannot be used with impunity in fumigation. The vapour it exhales, hurts the breast; irritates the nostrils and eyes, and gives a sense of suffocation.

Corrosive

Corrosive sublimate dissolved in water, and precipitated with fixed alkali, forms a precipitate of a deep red colour, which is another mercurial calx that adheres neither to gold nor to copper. This precipitate when well washed and dried, does, if thrown upon coals, rise much higher than the others we have spoken of, and diffuses a slight odor of marine acid which is not so offensive to the lungs as the nitrous acid, and applies itself to the surface of the body in the form of a red dust. By the action of the fire, some portions of mercury are disengaged and revived, as we see by its being able to whiten copper or gold. But this is in so small a proportion, that it cannot produce any remarkable effect.

Mercury dissolved in the nitrous acid, and precipitated by fixed alkali, occasions an effervescence which does not cease till the saturation is complete. If we use distilled water in obtaining a precipitate, the liquor becomes black: but if river water is employed, altho' it be

clear and limpid, the liquor becomes of a yellow colour, and after having been washed several times, we have a yellowish precipitate, not unlike turbith mineral. This variety of colour proceeds from the earth contained in the river water, and the yellow precipitate is almost completely a mercurial calx, which adheres but little, and with difficulty, to copper and gold. If we put some of it on the tongue, it makes no impression, and leaves no taste. Thrown on the fire, it rises but little, but then the vapor it exhales, is very disagreeable to the smell, and offensive to the breast.

If we melt corrosive sublimate in a solution of sal ammoniac, and then pour upon it fixed alkali, there will be an effervescence; and after saturation, there will be found a white precipitate, which, when well washed and dried, is the true precipitate or white mercurial calx. The sal ammoniac is, therefore, the cause of the difference there is between this and the true red precipitate. This precipitate
adheres

adheres neither to gold nor copper, it imprints a bitter and metaline taste on the tongue, and when thrown on the fire, diffuses a very disagreeable smell, which affects the breast. The vapor does not rise much, however, and but very little of the mercury is disengaged.

All these mercurial calces are, therefore, insufficient and dangerous, because they exhale a very noxious vapor, and do not enable us to revivify and elevate the mercury, without a degree of heat, to which the patient cannot be exposed.

C H A P. IX.

Preparation of the Powder for Fumigation.

FROM the experiments we have related, it seems evident, that mercury reduced to the form of a calx, can be elevated only by means of the muriatic acid with which it is united, and which is the most volatile of all the acids; but as it rises, it carries with it the mercury in its calcined state, so that it is attached to the body almost wholly in its saline form. As in this state of calx, it cannot be absorbed; I have attempted different methods, with a view to give it more volatility; to disengage it more completely from its precipitant, by means of the fire; to reduce it to a light vapor; and lastly, by restoring to it, its metallic lustre, to enable it to enjoy all its moveable properties.

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First OPERATION.

To accomplish all those objects, I began by taking a pound of corrosive sublimate, which I carefully prepared myself, with the assistance of the nitrous acid, according to Lemery's process, which seemed to be the most simple. After having gradually dissolved it in a sufficient quantity of water, I precipitated it, by adding to it a pound of fixed alkali that was likewise dissolved in the same way. Thirteen ounces, however, will be sufficient if the alkali is pure. The precipitate, which was of a deep red, was attended with no effervescence. After suffering the liquor to repose awhile, I decanted it off; then I poured fresh water on the precipitate, and poured it off again as soon as it became clear; repeating this, several times, till the water was perfectly insipid. I then dried the precipitate.— Sometimes, to do this more quickly, I have placed it before a gentle fire. The matter when thoroughly dried, weighed
eleven

eleven ounces; it was of a very deep red, but left no impression on the tongue.

In drying this precipitate, if too great a heat is applied, an acid odor is exhaled from it, which seizes the throat and incommodates the breast. It is for this reason that I have endeavoured to prevent this, by exposing it in a capacious vessel, to a strong heat, so as to detach all the superabundant acid, that the mercury may retain only what is necessary to keep it in a calcined state.

For this purpose, I put the eleven ounces [*See plate 3.*] of red precipitate I have now described, into a cylindrical cucurbit of unglazed earth, eight inches high, and six in diameter. I placed this in a reverberatory furnace two feet high and of eight inches diameter within. The ash hole is likewise of eight inches, and there is a grate within the furnace which serves to support the bottom of the cylindrical cucurbit. At the top of the
furnace

furnace there is a neck which fastens to it, having an opening in the middle of it about seven inches over; this is for the passage of the cucurbit which is secured in four places by earth, so that there are four openings for the passage of the fire. I have adapted to it, a tube of the same diameter as the cucurbit. This tube is likewise of earth, but is glazed both within side, and without; it is curved, and each branch of this curve is about eleven inches in length. To this tube I have adjusted five aludels that are likewise composed of glazed earth. The great circle of each of these is eight inches in diameter, and the axis, seven. I secure them on a board, placed horizontally. After luting all the joints of these aludels, I close the last of them with some convenient cover, which is open in the middle. With such an apparatus as this, I began to treat the matter very gently; insensibly raising the fire, till the iron-grate of the furnace became red hot. I continued it in this degree during two hours; after which, I augmented the fire,

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till the cucurbit itself began to have a red heat, and I kept up this heat during the two last hours of the process, the whole of which lasted six hours. When the vessels were cool, I unluted them. I found in the fifth aludel, a whitish and flighty acid dust, which covered the whole inner surface of the aludel. In the fourth, I observed a dust of a cinder-like colour, which covered only about half the aludel, on the lower side. In the third, the powder was of a greyer complexion, in the lower portion of the aludel; the upper part was covered with minute globules of mercury. In the second and first, the powder was greyer still, and in greater abundance, being mixed at the same time with crude mercury, which was very easily to be distinguished.

The curved tube contained in the horizontal part of it, a powder that was sensibly mercurial; and was covered with an exceedingly thin layer, of a white saline complexion.—Neither the powder contained in the tube, nor in these *four* aludels,

ludels, had any thing of an acid taste. After taking out the mercury and the powder, I found the weight of the whole to be ten ounces.

What remained in the cucurbit, or rather pot, was a very light reddish matter, weighing about two drams; and was nothing more than the remains of the vitriolated tartar contained in the fixed alkali and some of the mercury reduced to a calx, which gave it its reddish colour, and which was not exposed to a fire of sufficient violence to revivify it.

To separate the powder from the crude mercury, and deprive it of any portion of sublimate it might still retain, and thus be assured of its being perfectly neutral, I put the whole mass into a marble mortar which I placed in a glazed earthen jar. I then poured hot water upon it; and thus, by triturating the mercury and the powder with a glass pestle, and continuing to pour hot water upon it, the lighter part of the powder was carried by

the water into the earthen pan, while the mercury remained at the bottom of the mortar. When the powder had subsided, and the water was become very clear, I decanted it; and after having repeatedly washed the residuum, I dried the powder, which weighed about six ounces. It was of a slate like colour, perfectly insipid, and adhered easily to gold or copper. It may be called *pulvis mercurialis simplex*. Simple mercurial powder.

Second OPERATION.

I took a pound of corrosive sublimate, prepared in the manner I have already described; and likewise, a pound of very pure filings of iron finely powdered. I mixed them intimately together, and then poured enough water upon them, to form them into a paste, and dissolve, in some measure, the sublimate; that the acid, by attacking the martial earth and uniting with it, might more easily quit the mercury, and thus give it more liberty in
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the operation. Mixed in this way, the matter grew hot, and when it was cooled again, it had quite lost the astringent and corrosive taste it had before. After having exposed it to a sufficient degree of heat to dissipate its moisture, I put it into the cylindrical cucurbit, and then adjusted the whole apparatus in the manner I before described, gradually augmenting the fire as in the last process. When the vessels were cool, I took out what was contained in the aludels, and then separated the powder, from the crude mercury, by the means of hot water as before. In this way, I procured six ounces of a powder, that had a deeper grey colour than that of the last operation, and four ounces of crude mercury.

As the marine acid volatilizes the iron, in this process, this powder may be named *pulvis mercurialis martialis*; *martial mercurial powder*. After having made the mixture, we may, if we desire it, proceed immediately to the operation without moistening it, but then it will be necessary

necessary to heat the matter very slowly, in order to give the acid time to attack the iron. Without such a precaution, there would rise into the aludels, some portions of sublimate, which would, indeed, be very easily dissolved, and carried away, by repeated lotions with hot water, and the insoluble powder would continue in a state of perfect neutrality.

In close vessels, the marine acid which is united with mercury, rises with it combined in the same way. On the open fire this same acid will inflame, and leave the mercury, which by the action of the fire will rise very rapidly.

The marine acid, without any other addition, is inflammable, and burns with a blueish flame: for if we imbibe with marine acid, coals that have been burnt out, and then place them in a great heat which affords no flame, we shall soon perceive a blueish flame, which will continue longer than the coals might be supposed to last, and will be renewed, if we
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put other coals there, impregnated in the same manner. But it is observable, that this acid, altho' inflammable, expands itself only in proportion as it is united with metallic substances (a).

The marine acid is therefore inflammable, and when retained in close vessels, makes a considerable explosion. The duke of Aven has proved this in a memoir, he read lately to the academy, on the subject of some experiments he had made with the marine acid and mars. An accident that happened to me twenty three years ago, led me to observe the same thing. I had been revivifying corrosive sublimate, by means of iron filings, in a retort, thinking that this would be

(a) Dr. Priestly found that copper, lead, iron, tin, and zinc, when dissolved by the marine acid, yielded air which lost its elasticity by coming in contact with water; after which, the air that remained was inflammable---he concludes, that inflammable air universally consists of some acid vapor combined with phlogiston.

more

more expeditious than by the apparatus I have described. When I supposed the operation to be at an end, I removed the vessel, filled with water, which had served as a receiver; the fire which had been very strong, was almost extinguished, and there proceeded from the neck of the retort a slight vapor, which contained no mercury, as it whitened neither gold nor copper. In examining this matter, the candle I held in my hand came too near, and the vapor suddenly taking fire, there came out of the neck of the retort a globe of fire which burnt my face. In the same moment I heard a considerable noise, and the explosion which took place broke the retort. This disagreeable accident was a useful lesson to me, not to repeat this operation in too small vessels. I should certainly have avoided it, with the apparatus, I have before described. We may venture to conclude, that the inflammable principle of the iron, becoming united with the muriatic acid, was the cause of this phenomenon.

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I have sometimes observed, that in the fifth aludel, the marine acid had volatilized the iron, and covered it with a yellowish powder of a slightly acid taste, not unlike that of the white powder, which is found in the fifth aludel, in the first operation. This phenomenon seemed to depend on the greater or less degree of heat. This powder, when placed on the tongue, is absolutely insipid: thrown upon the fire, it inflames and rises very rapidly; diffusing a flame of a deeper blue colour than that afforded by the *pulvis mercurialis simplex*. Hence we may infer, that it contains more of the muriatic acid, and for this reason it ought not to be employed alone, but with great prudence, and only in the circumstances I shall mention.

The crude mercury which rises in this operation, is to be considered as the purest we can possibly procure: it cannot be suspected of containing any metallic sub-

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stance. We know that the nitrous acid (b) dissolves almost all the metals, and whatever portion of metallic substances may escape it in this process, cannot, however, avoid the action of the muriatic acid, which, in sublimation, becomes united to the mercury detached from the nitrous acid. The mercury being then precipitated by the fixed alkali, which unites with the marine acid, resumes by the action of the fire its metallic form, and is indisputably the purest, and consequently the properest to be introduced into our system. Both reason and observation prove to us, that mercury, after having circulated through the humours is insensibly thrown out by the emunctories. If we employ a pure mercury, we shall have no reason to fear, that it will deposit in its course any noxious foreign matters.

(b) The reader will recollect that the author described his sublimate, as prepared according to Lemery's method, by the assistance of the nitrous acid.

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This mercury is, therefore, the only one which ought to be employed in the treatment of venereal patients, either by fumigations or by frictions.

Third OPERATION.

Having collected the four ounces of crude mercury, which resulted from each of the two operations, I put it into a marble mortar that I had taken care to heat before hand. I then added to it four ounces of pure clay in powder, and triturated the two substances together, during about four hours, taking care now and then to warm the mortar. This precaution tends greatly to accelerate the division of the mercurial globules. This mechanical extinction or division of the mercury serves no other purpose than that of increasing the number of its moleculæ, and by multiplying its surface, to expose it more fully to the action of the fire, and thus raise and divide it more completely. This powder

may be called *pulvis mercurialis argillaceus*; *argillaceous mercurial powder*.

As this powder contains no saline substance, and is nothing more than pure mercury exceedingly divided, it can in no way offend the sensible and delicate organs, as the eyes, lungs, &c. it may therefore be employed in diseases of the eyes, face, nose, mouth, and even in the beginning of phthisis. It may likewise serve to increase the quantity of loose mercury, by mixing sometimes more and sometimes less of it, either with the *simple* or the *martial mercurial powders*, which may likewise be employed alone in the circumstances I shall describe.

The venereal disease being of too much importance to be treated by persons who are not skilled in the profession, I shall not enter into a detail of the different combinations which may be made of these remedies. The temperament of the patients, the symptoms of the disease, and other circumstances, will determine them

them in the choice, and mixture of these medicines and in the variations of the dose to be employed. Persons who have been accustomed to the treatment of venereal complaints, will very easily acquire this knowledge. I shall, therefore, content myself with mentioning some few particular circumstances, in which either of these powders is to be preferred,

It will be contended, perhaps, that the first and second of these fumigating powders, do not essentially differ from *mercurius dulcis*, and, therefore, may be expected to have the same properties. This at first view may seem likely, but the experiments I have made with these three substances, have by no means been attended with the same success. The *mercurius dulcis* not only inflames with less quickness, and ascends more slowly than either of the two powders; but it likewise diffuses an odor of marine acid in much greater abundance, and sometimes excites cough. This proves that it contains more of the acid than our powder.

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When patients have been treated with the *mercurius dulcis*, the symptoms have disappeared much more slowly, and I have many times been obliged to abandon it, and to have recourse to the powder above described, to complete the cure. I cannot doubt, however, but that corrosive sublimate being first dissolved and then precipitated by fixed alkali, will, if again sublimed, yield truly a *mercurius dulcis*; but this will differ from our powder, for altho' it be four times sublimed, it still diffuses more odor, burns more slowly, and affords a thicker vapour. Besides, our fumigating powder contains crude mercury divided into infinitely minute globules and which is still attached, I cannot say by what means, to the saline part which contains the least quantity of the marine acid that is possible.

With a view to form an exact comparison between these two substances, I made the following experiments.

Experiment

Experiment the First

I sublimed our fumigating powder in a phial, to the inner and upper part of which the mercury easily attached itself, being but slightly adherent to the saline part. The salt was next sublimed in the form of minute spiculæ, of a white colour; I then broke the phial and found the spiculæ ranged towards its axis, and globules of mercury dispersed here and there. After collecting every thing that was within side the phial, I put the whole into a marble mortar and triturated it thoroughly; the crude mercury soon became reunited to the saline part, and the powder was less grey than before the sublimation; because some of it was dissipated during the operation: a proof, that the grey colour is proportioned to the quantity of crude mercury that adheres to the saline part.

Experiment the Second.

I took some *mercurius dulcis* that had been four times sublimed. I triturated it

it with crude mercury, and the powder became of a grey colour. I then poured water upon it to separate the mercury which was not united to it, and when I had decanted the water, and dried the powder, I found the colour of it to be like that of our powder: but it was not so bulky, and was more disposed to form itself into globules. When sublimed in a phial, it afforded the same phenomena as our powder. From these experiments it appears, that altho' there is an apparent similitude between the two compositions, they sensibly differ from each other. *First*, Because the mercury which has been added to the corrosive sublimate for the making of *mercurius dulcis*, is common mercury and therefore liable to be impure. *Secondly*, That which is added to the *mercurius dulcis*, to give it its grey colour, is perhaps not less impure than the first, and of course, this remedy, which at first sight may seem to be the same, may in practice have very different effects.

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My health not having permitted me to make the experiments which would be necessary to prove the efficacy of this *mercurius dulcis*, and my process being neither more difficult, nor expensive than that is, I content myself with describing that method which has always succeeded with me.

Fourth OPERATION.

Preparation of the mercurial Liquor.

Take half an ounce of the simple mercurial powder, and put it at the bottom of a glazed earthen pot; pour upon it two pints of distilled water; reduce this quantity, by boiling, to a pint, taking care to place the pot upon the fire in such a manner, that the heat may be chiefly directed to the bottom of it: the liquor which will be of a whitish colour, may be then suffered to cool. When the sediment is completely deposited, the liquor, which is to be repeatedly filtered, till it is clear and limpid, will be found to have a somewhat bitter taste.

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As this liquor is chiefly intended for internal use, it is of consequence to know how much mercurial salt it contains.

1st. Evaporate it, and there will then appear upon its surface a silver like pellicle, which will preserve the same form till all the water is evaporated. What remains at the bottom of the vessel after evaporation, will be found to be a blackish powder, and if carefully collected, will amount to about eight grains. This is a soluble mercurius dulcis of a slightly bitter taste. This salt easily attracts humidity from the air, and feels unctuous to the touch.

2dly. If you perform the same operation with river water that has been well filtered, you will find it to be more bitter; and the pellicle, which will form upon its surface, during the evaporation, will be thicker and of a greyish colour. When the evaporation is finished, there will be found to be more salt than in the first operation.

3dly.

3dly. If you submit the *martial mercurial powder* to the same forms in distilled water, the result will be the same as in the operation, No. 1, with this difference only, that the pellicle will be of a more varied colour, like the rainbow, in which the red will predominate. This seems to prove the presence of iron.

4thly. If you do this with very limpid river water, instead of distilled water, the result will be as in the operation, No 2. These powders will be equally useful, after boiling as before, for the purpose of fumigation.

It will be alledged, perhaps, that the solution of these powders contains corrosive sublimate. They who attend to the following experiments, will see clearly, that this supposition is false.

Experiment 1.

If we pour fixed alkali dissolved in distilled water, on a solution of corrosive
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sublimate, likewise made in distilled water, the liquor will redden, and there will be a red precipitate. This precipitate is then the true sign which denotes the existence of corrosive sublimate.

Experiment 2.

If we pour the same solution of *fixed alkali* on our *mercurial liquor* made with distilled water, the liquor will continue limpid, and will not change its colour: a proof that it does not contain any corrosive sublimate.

Experiment 3.

If the same solution of fixed alkali is added to river water, in which our *simple mercurial powder* has been boiled, the water will whiten, and there will be found at the bottom of the vessel a light white precipitate. If a solution of the *martial mercurial powder* is submitted to the same proofs, the produce will be the same as that with the *simple mercurial powder*;

powder; notwithstanding which, these solutions will be of a more bitter and disagreeable taste than that of the *simple mercurial powder*, dissolved in distilled water, so that this last will, of course, in every respect, deserve the preference for internal use.

If still farther proof should be required of the non-existence of sublimate in our mercurial powder, it will be easily found, by comparing the residuum after the evaporation of our mercurial liquor, with the residuum after the evaporation of corrosive sublimate in distilled water, which continues to retain its saline form, and all its corrosive quality.

It will be asked, perhaps, why there is no precipitation from the mercurial liquor prepared with distilled water, as well as from that made with river water. This difference seems to depend on the earth contained in the river water. In river water the fixed alkali is united to the different acids combined in it with calca-
reous

reous earth, which, becoming free, unites itself with the mercury, and is precipitated with it in a white form. The effects of these mercurial salts, as well as of the panacea, and of the mercurius dulcis, will be proportioned to their solubility. And it has been proved, that they are so little soluble in distilled water, as to require two thousand, three hundred and four parts of water, to dissolve one, and that even then, the solution required a long boiling. For simply hot water dissolves no part of them. These salts can therefore, not be dissolved in our bodies, and can pass into the circulation only by the help of a very abundant liquid. This analysis farther proves, that for internal use, our mercurial liquor is to be preferred to corrosive sublimate for reasons before-mentioned. It will, therefore, be of great use in long and obstinate diseases which have their seat chiefly in the viscera. It will likewise be very serviceable in the gonorrhea in both sexes. The dose may be from one ounce to four, and even more, in any convenient drink, adapted

apted to the circumstances of the disease. As each ounce of this liquor contains only a quarter of a grain of mercury, we may be always sure of the quantity that is given; for, altho' the boiling should be much longer continued, a pint of distilled water can never be made to dissolve more than eight grains of the powder.

This remedy may be given without any fear of injuring the patients stomach, or occasioning pains of the bowels, weakness or faintings, or any of the ordinary effects of corrosive sublimate, tho' given in the smallest dose.

This liquor may likewise be usefully applied to wounds, without occasioning an eschar, or it may be thrown up in the form of an injection when diluted with barley water, &c.

Altho' in every respect I prefer this mercurial liquor to the corrosive sublimate, I by no means think it ought, in adults, to be used as the sole antivenerial
remedy,

remedy, as is done with the sublimate; I recommend it only as an auxiliary, when the disease is obstinate, and do in all cases combine its use with fumigation.

It is natural to suppose, however, that this liquor will be very useful for infants who are infected with the venereal disease, and that it may alone suffice in many cases which will not allow of fumigation.

Altho' I think, I have sufficiently proved, that there is no corrosive sublimate in our *mercurial liquor*, I am far from supposing, that I have explained all the phenomena which its analysis affords; there are some of them, which, I confess myself unable to explain satisfactorily.

C H A P.

C H A P. X.

*Of the Use of the different fumigating
Powders.*

WHENEVER the Venereal Disease affects the surface of the body, by occasioning herpes, blotches, or other eruptions, chancres, warts, condylomata, &c. I make use of the *martial mercurial powder*, in doses of one or two drachms. At first, I fumigate only every other day; but if the mouth does not become affected, and the gums do not swell or become sore, I repeat the fumigation two days together, and then omit it on the third. When these exterior effects are almost dissipated, I begin to use the *simple mercurial powder*, in the same dose, as the other, constantly noting the effects of the remedy, and increasing, or diminishing the dose of it, accordingly, I continue this method, till after all the symptoms have disappeared: usually a-

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dopting, in this, the rule which experience has taught us in the cure by frictions.

When the disease has affected the eyes, the face, the throat, &c. I prefer the *argillaceous-mercurial powder*: beginning with doses of half a drachm, and augmenting them, insensibly, to a drachm. I do not, however, trust the cure to the local fumigation: I constantly apply a general fumigation, immediately after the local one, but with a less dose of the powder, on account of that which has been exhibited just before.

In the beginnings of Venereal phthisis, I use, with great success, the same *argillaceous mercurial powder*, and I pass, insensibly, from that, to the use of the *simple mercurial powder*; especially, if the purulent expectoration, does not change its nature; and there is no diminution of the other symptoms. In cases of glandular swelling, indurated buboes, or swelling of the testicles, with or without suppuration,

tion, I have always succeeded best, with the *martial mercurial powder*.

In cases of anchylosis or exostosis, I prefer this same *martial mercurial powder*, especially when the pains are very violent, and without inflammation; but when these pains are appeased, I mix it, with success, with equal parts of the *argillaceous mercurial powder*.

In cases of gonorrhœa, and gleet, in female patients, when the inflammation is, in some measure dissipated, I use the *simple mercurial powder*, with success; the patient being seated on a tressel or stool, which will be described hereafter.

The Venereal symptoms, which are peculiar to women, are less difficult to cure, by this, than by any other method. I have seen excrescences around the os uteri, hard tumours of the uterus itself, and, sometimes, that viscus become exceedingly voluminous, accompanied, at the same time, by violent pains, and a

very profuse discharge, all which, are the pathognomonic symptoms of a confirmed pox, I have seen, I say, all these yield to the fumigations I here propose. I will only observe, that when the symptoms are mitigated, the fumigations may be either of the *simple mercurial powder*, or of the *martial mercurial powder*, mixed in equal proportion with the *argillaceous mercurial powder*; and this mixture may be continued till the cure is compleated.

If it sometimes happens, though, I believe, it very rarely will, that salivation is thought to be indispensably necessary, it may easily be excited by fumigating for several days without intermission, with a stronger dose than what I have prescribed.

It is of consequence, to be careful to disperse the powder over the whole surface of the fire, that all of it may inflame at once; otherwise, if it should fall in one mass, a part of it only, would, perhaps, inflame, the rest might be apt to fall through

through the grate by its weight, and thus the fumigation would be an imperfect one.

In obstinate gonorrhœas, frictions are sometimes advantageously used, but the rubbing the ointment along the perinæum and urethra, does sometimes excite inflammation, and adds to the discharge, instead of diminishing it. I prefer fumigation, with the *simple mercurial powder*, to friction, in these cases; because the mercury, when applied in the form of vapor, penetrates the parts with greater facility, and softens all the indurations of the urethra. It constantly happens, that, soon after the use of the local fumigations, the matter that is discharged, becomes of a better colour and consistence, and, by means of a proper regimen, a cure is soon effected.

Nor is the method less useful in fistulas *in perinæo*, which, we know, are so often the effects of inveterate gonorrhœa; or, in induration of the prostate, which sometimes causes stranguy, and even retention-

tention of the urine. In these cases, the use of the bath is insufficient for alleviating the symptoms:---but fumigations will be found to produce the best effects, and after they have been several times repeated, recourse may be had to the use of bougies; and thus, by their united assistance, will a cure be brought about.

How many women are there, who, from the irregularity of their husbands, are incommoded with a nauseous discharge, that flows abundantly, with a variety of colours, and of which they know not the source? how many other women, after having contracted a gonorrhœa, continue to be subject to a constant gleet? These discharges are usually confounded with the fluor albus; but sometimes they communicate infection, and in almost all, are the effects of a Venereal taint. I have often been consulted in cases of this sort, and having suspected the true cause of the discharge, have advised the use of fumigations with the *martial mercurial powder* as being the most active. The
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itching and disagreeable sensation of the vagina, together with the excoriations which were produced by the acrid humour, were soon corrected, and the discharge becoming more laudable, was insensibly suppressed.

In those painful exostoses, with which the arms, the legs, and even the ribs, are sometimes affected, it is impossible to apply frictions, without causing intolerable pain. Nor in cases of painful ankylosis, can we use frictions, without danger of exciting violent inflammation in the diseased joints.

In all these cases, I consider fumigation as the sole means of destroying the virus, which being imbibed by the cellular substance of the bones, and by the cartilages and capsular ligaments occasions these disorders. It is to be noted, that both local and general fumigations will be necessary.

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It sometimes happens, that the Venereal virus is confined, as it were, to a glandular part, or in follicles, and often remains there a long time, without producing the symptoms of Pox. In these cases, the fumigating vapor is particularly useful; it penetrates the part, and thus destroys, at once, the seeds of the disease, without exposing us to the danger of throwing back into the circulation, as in the case of frictions, a matter which preserves all its virulence, and which may occasion a confirmed lues.

Often, in diseases from obstruction, in which I suspected the presence of the Venereal virus, I have been unwilling to hazard fumigation, until I could acquire some certain knowledge from the patient's confession; and this, not because I feared any thing from the effects of the remedy, but because, in very doubtful cases, I was unwilling that its inefficacy should take from the confidence I wished to preserve to it, as being an exceedingly
useful

useful remedy, in cases that are not equivocal ones.

But as physicians will now be able to determine on the good or bad effects which this mild and penetrating vapor may be liable to produce in cases of glandular obstructions ; they will think, perhaps, as I do, that it ought to be used whenever there is the least suspicion of a Venereal taint.

C H A P. XI.

Of the Preparation, Regimen, &c. of the Patient.

ALTHO' the method I have proposed for the cure of the Venereal Disease, is very simple and easy, there are certain necessary precautions to be adopted, not only as to what concerns the preparation and regimen of the patient, but likewise his surgical treatment, when his case requires it.

In cases of recent lues, the fumigation may be exhibited without any previous preparation; but the patient should be directed to a mild and simple diet, and be conducted, in this respect, as in the cure by frictions.

If there is phymosis, paraphymosis, or phlegmonic bubo, after bleeding, the patient,

tient, moderating the inflammation, by emollient poultices; and, in short, performing any other operations that the surgeon may think necessary; immediate recourse may be had to fumigations, which may be repeated every (or every other) day, until the symptoms have disappeared. This rule, which is a general one, in the cure by frictions, ought likewise to be common to the treatment by fumigation.

If there are wounds or ulcers, it will be right to direct the mercurial vapor, immediately to the part, and when the patient comes out of the fumigation-box, such dressings may be applied to the ulcers, as are usual in the cure by extinction.

It will be necessary, however, to abstain, as much as possible, from the use of greasy applications, such as ointments, balsams, and plasters, especially in the case of chancres, warts, and condylomata. The surgeon will do better to ex-

tirpate the warts, and touch their remains with the lapis infernalis. The common application to all these, may be, our *mercurial liquor*.

In all cases of local affection which require dressings, I am accustomed to fumigate the diseased part, before the application of any topics. The dose of the *simple mercurial powder*, in these local fumigations, should be, from eighteen grains, to half a drachm. I conduct the vapor either through a strait, or a curved tube, as may be most convenient; one end of this tube is enlarged to the shape of a funnel, that the vapor may enter it with more ease. If the patient has received a general fumigation in the morning, the other is generally reserved till night.

These few hints will be sufficient for the experienced practitioner, whose judgment will lead him to vary the treatment, as unforeseen circumstances, in the course of the disease, may seem to require. The
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proper management of Venereal complaints, is a matter of so much real importance to society, that I forbear entering into unnecessary details, lest the illiterate and enterprising, should make an improper use of notions, which, abstracted from the principles of medical science, and applied at random, might produce very fatal effects.

C H A P. XII.

Advantages of this, over other Methods.

I VENTURE to flatter myself, that this method, by the ease and surety with which it may be conducted, will become very useful to society. It will afford two useful objects of œconomy to the state; one of which will relate to population, and the other to the expence of treating the troops, which will be much more inconsiderable, by this, than by any of the other methods.

The greater part of the Venereal complaints, with which soldiers are attacked, may be treated by the regimental surgeons in barracks; and they only need be sent to the hospital, who are confined to their beds, by any local complaint; or who require any operation to be performed

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ed on them. I will venture to say, that, not more than one in six, will need this. The expence will, therefore, be five-sixths less; the cost of the remedy, not being of sufficient consequence, to be brought into the calculation. Many of the soldier's days in the hospital, will, therefore, be saved, and, of course, much expence, in the articles of linen, flannel, ordinary medicines, &c. There will, likewise, be another more interesting advantage, which will be that of seeing the patients recovering their health and strength, during the use of the remedy, and becoming, very speedily, capable of duty.

The utility of this method, will be still more sensibly felt, when troops are in actual service. The surgeons may easily fumigate the patients, who have only chancres, warts, incipient buboes, &c. or other symptoms of slight lues; and, as the patients are not confined, during the use of the fumigations, but are at liberty to go out, as usual, in the air, this alone, would give it the preference to the cure by frictions;

tions ; as even when this is done by *extinction*, as it is called, the patient cannot always expose himself to the air, with impunity.

Amongst a great number of poor patients, whom I have treated gratis, I have seen artificers, and servants, who came very early in the morning, to receive the fumigation, and then went about the business of the day :—neither the cold of Winter, nor the heat of Summer, proved any obstacle to their cure.

When the patients have lues, combined with scorbutic or scrophulous diathesis, or have been subject to serpiginous eruptions, previous to infection, it will be right to join to the fumigations, the use of anti-scorbutic remedies, together with opening medicines, sudorifics, preparations of steel, or others, that the state of the patient may indicate.

If we sometimes meet with singularly obstinate cases, in which we have
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seen certain preparations of mercury given with success after the use of frictions, we may do the same here : exhibiting them, however, with great caution, and not till a sufficient number of fumigations have been applied to destroy the venereal virus, which, being combined with other causes, renders the case so difficult of cure. In circumstances which may seem to require the use of the warm bath, this remedy may be very advantageously used on the same day as the fumigation. This combination will often be very proper in diseases of the skin. Bathing cannot be so efficacious in the cure by frictions, when the skin is covered with pomatum.

Fumigation seems likewise to be the best if not the only way in which we can apply mercury to certain parts of the body, as to the genitals of women, for example, the scrotum of men, or parts that are covered with hair, and where the use of friction excites itching, inflammation, &c.

In fumigation, the whole surface of the body receives a small portion of the mercury at the same time, whereas in the cure by frictions, the part on which the mercury is rubbed, is alone loaded with it. Besides, in frictions, the mercury is never rubbed on the abdomen, the breast, or the neck ; whereas, the mercurial vapor affects equally all those parts, and the air that the patient breathes, being impregnated with this vapor, carries some portion of it into the lungs, without exciting the least inconvenience.

I have seen some cases of venereal phthisis in the first, and sometimes in the second stage, cured by this mercurial vapor.

The lues, whether treated by fumigation, or by frictions, will, in general, be more or less tedious in its cure. In every method that is adopted, the cure is now and then imperfect, merely because the patient has continued it during too short a time. Every body knows that the variety of temperament, the length of time
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the patient has been infected, the greater or less activity of the virus, will occasion so many variations in the cure: and that a radical cure can in no case be obtained, until the mercury shall have penetrated the system, and operated certain changes in it. These changes will depend on various accidental causes, such as difference of sex, &c. In fat people they will be more slowly effected, perhaps, than in lean ones. Upon the whole, however, I believe that the cure will, *ceteris paribus*, be performed in less time by fumigations than by extinction.

In ulcers of the throat, which often erode the velum pendulum palati, the palate itself, and tonsils; and which sometimes spread to the epiglottis, and cause hoarseness, and even the extinction of the voice, all which are so many symptoms of inveterate lues: the mercurial vapor will be exceedingly salutary, by calming, moderating, and soon stopping the progress of the disease. We know with what rapidity these soft parts are

eroded and destroyed, and how soon the thin bones of the nose, &c. become carious. Frictions are commonly very insufficient in these cases, the evil increases as it were under the remedy. If the mercury, as often happens in frictions, affects the mouth, the evil is rendered much worse, and the miserable patient sometimes falls a victim to it.

The superiority of fumigations will be evident in ulcerations within the cavities of the nose, or in cases of polypus concretion there, or in caries of the maxillary sinus, ethmoidal bones, &c. The pains which accompany these symptoms are commonly very soon relieved by the mercurial vapor.

It has been sometimes thought necessary to fumigate with cinnabar, in these cases, frictions not having been found to relieve the patient with sufficient quickness; but we have already observed the fatal effects which may be expected from cinnabar; whereas, our fumigating remedy
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is inodorous, and may be breathed with impunity. I have employed it with great success in Venereal ophthalmia, which often follows a suppression of gonorrhœa; I have, in these cases, seen the eye-lids and lachrymal sac become tumid; the transparent cornea thickened, and, together with the state of the tunica conjunctiva, threatening the loss of the eyes, by the corroding activity of the Venereal humour, which flowed from all those parts. After moderating the inflammation by venæsection, and emollient applications, I exposed the diseased parts to a local fumigation, but without omitting the general one; and by these means, I usually obtained a cure, without seeing any return of the discharge from the urethra, which often happens by the other methods.

A prophylactic, has long been a desideratum in the Venereal Disease. It is doubtful whether medicine can afford such a remedy. I believe, however, that
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fumigation, applied immediately after impure commerce, may act in this way. It may, therefore, be considered, in some measure, as a preservative, though I by no means, speak of this as of a certainty. However, as it exacts only a mild regimen, and requires no internal remedy, or confinement, &c. they who have had a suspicious connexion, will not hesitate to make use of it. The secrecy with which this remedy may be adopted, will, likewise, on some occasions, be not a little favorable to it.

The boasted remedies of empiricism, have, perhaps, been as pernicious in their effects on society, as the Venereal Disease itself. Would it, therefore, not be a wise and prudent step in administration, to adopt some method which may tend to stop the progress of an evil, which is so fatal to population. It would seem likely, that establishments for this purpose, might be
made

made in all the principal towns in the kingdom; and they would not be expensive ones.

Hitherto the provinces, and the capital itself, have been without such an establishment. The hospital of Bicetre is the only one, in which indigent Venereal patients are treated gratis. But this resource is very inadequate to the number of unfortunate people, who would wish to be admitted: and how many die every year, for want of such assistance? By the simple method I have proposed, the lives of our fellow-citizens might be preserved, and rendered useful to the state, for a very trifling expence; and we might be enabled to check, if not to put a stop to the propagation of the disease.

How convenient will this method of cure be to nurses, who give suck to diseased children; to pregnant women; and to children, who bring the infection into the world with them. It would be impossible to give these infants corrosive sublimate

limate, and the texture of their skin, is too delicate to admit of frictions. The mercurial vapor, is, therefore, the only remedy, which can preserve them from death.

C H A P.

C H A P. XIII.

Of the mixed Method of Cure.

I WISH to make a few more observations on the preference which mercury, applied externally, has over all the other methods.

Many eminent physicians have begun the cure of the lues venerea, by giving Keyser's pills; and finding them insufficient for eradicating an old taint, have employed frictions with a view to accelerate the effects of the internal remedy. This wise practice has often produced very good effects. A less number of the pills has been given, and the accidents have been less alarming. The sublimate has likewise been used in the same way, and the symptoms of the disease have constantly

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stantly yielded much sooner, and the patients have been less disordered, than when either that or Keyser's pills were used alone.

Is it then to either of these two that the cure is to be ascribed in these cases? It appears very clearly, that without the frictions, the disease would probably have been much more tedious, and more difficult of cure, and the functions more affected. It would, therefore, seem then, as if the frictions have the greatest claim to the merit of cure here: and it follows, that mercury, applied externally, is the surest means of eradicating the venereal virus. But if, as will sometimes happen, we meet with cases of inveterate lues, that are obstinate and difficult of cure, and which seem to require a mixed treatment, let us, at least, avoid the inconveniencies that would result from the use of these mercurial salts, the ravages of which, we have already exposed, and if mercury is to be given internally, let us rather give the *mercurial liquor* before described,

described, either alone or mixed with syrup, or in some other suitable vehicle. I have often given two three and four ounces of this liquor a day; but as I considered it only as an auxiliary, I did not the less expose my patients to fumigation.

I have thus fulfilled the object I had in view, when I began this work—The method I have proposed in it, is the result of much experience, and I wish it may be productive of all the good I have reason to expect from it, after having so long and so often seen it succeed.

I present it to my fellow-citizens as a mark of my esteem for them, and as a proof that I have not been wanting in assiduity to promote the welfare of the public.—Others who are pursuing the same course, will, perhaps, go farther than I have done, and improve on the present method, or discover others which shall be preferable to it. I exhort them to take experience for their guide, and to

submit their cures to time, for it is he only who can prove their insufficiency, or confirm their utility.

C H A P. XIV.

Description of the Machines, &c. necessary for Fumigation.

THE ancients, as we have before observed, made use of a kind of tent for the purpose of fumigation; and the patient who was seated under it, breathed the vapor of the powder, or of the cakes that were thrown upon the fire. These fumes, which were often very thick, and loaded with arsenical and corrosive particles, deprived him of respiration, before the whole surface of the body had been exposed to the vapor. Sometimes, indeed, his head was without, but then the
vapor

vapor passing easily thro' the cloth which enveloped him, was imperfectly applied to the body, and the patient always breathed enough to be violently incommoded by it.

With a view to avoid all these inconveniencies, and to be able likewise to reduce the application of mercury, to the surface of the body, to a constant and invariable method, I contrived a machine, of which I shall now give a description.

It is an oblong square box, in which the patient is shut up: he sits on an open seat, and this seat is so contrived as to be capable of being raised or lowered as the height of the patient may require,

At the bottom of the box, there is a square hole for the admission of the furnace. On a level with the bottom, at one of the sides of the box, there is an opening with a sliding door, through which

which the powder is to be thrown on the fire.

At the top of the box there is another opening which shuts likewise, with a sliding door—this is for the passage of the patients head and neck. That the vapor may be more completely retained within the box, it is right to push the sliding door close to the patients neck, and to put a napkin slightly round it.

When it is necessary to give particular fumigations to the parts of generation of either sex, one of the treffels may be used. It seems unnecessary to describe these, as they are represented with great exactness by the engraver. The kind of furnace which is necessary for the box, and for the treffel, is likewise represented in the same plate.

In hospitals, where it will be often required to fumigate many patients at once, it is necessary that the place should be so disposed, as that there be at each extremity

mity of the piece, under the platform, an opening through which the vapor may be drawn by the current of air. This opening should be furnished with a sliding door, that it may be shut when there is occasion. It will be necessary, likewise, to separate the piece according to its length, by a partition; and there must be a door at each end. The partition must be so disposed, that the opening made at the bottom of the box, to admit the current of air, may correspond with an opening in the partition. This too, as well as the others must be furnished with a sliding door.

In large hospitals, machines of this kind might be constructed of more durable materials than wood, and as they would not be required to be moveable, they might be made of brick work.

C A S E S.

ALTHO' a very long experience had convinced me of the superior efficacy of the method of cure described in the foregoing pages, I was unwilling to present it to the public until some of the most eminent physicians and surgeons, together with several general officers, had been witnesses of its success.

I therefore, in the month of August 1772, established a private hospital in which I gave lodging, nourishment, &c.
to

to a number of venereal patients. To this hospital, I invited the following gentlemen.

Drs. De Vernage, of the faculty of physic at Paris.

Belleteste, physician to the Hotel Dieu, at Paris.

Bercher, physician to the army, and likewise first physician to the Hotel Dieu, at Paris.

Munier, physician to the hospital of Invalids.

Mac Mahon, physician to the Royal Military school.

Hofly, of the faculty of physic at Paris.

Maloet, physician to the hospital of Charity.

Le Thieullier, dean of the faculty.

Thierry de Buffy, physician to the hospital of Charity.

Dumangin, of the faculty of physic at Paris.

R

Vicq.

Vicq. D'Azyr of the Royal Academy of Sciences, &c.

Lalouette, jun. of the faculty of phyfic at Paris, who had the care of this little hospital.

Messrs. Moreau, surgeon major to the Hotel Dieu.

Du Fouarre, surgeon major to the French guards.

Sabatier, surgeon major to the Invalids.

Pipelet, of the Royal Academy of Surgery.

Majault, principal surgeon to the Count D'Artois, &c.

Chambon, surgeon to the hospital for the French guards.

Silvy, surgeon to the Queen. This gentleman undertook the surgical care of the hospital.

The

The above gentlemen visited the patients at their entrance, during the cure, and at their going out.

Amongst the general officers who were so obliging as to attend occasionally, I shall name only those who have permitted me to give their names to the public, and these are

The Count D'Herouville
 The Marquis de Roquepine
 The Count de Saluces
 The Chevalier D' Arcy
 The Chevalier de Bongard
 The Chevalier D'Elbé.

The reader will be so good as to observe, that the following reports were hastily written at the time the patients were examined, and were signed by the visiting physicians and surgeons. I have not made the least alteration in them, because it could not have been done without violating a sort of respect which is due to acts of this kind.

If I have suppressed the names of the patients, tho' inscribed in the reports, the omission proceeds from the tenderness due to them, and from an unwillingness to disclose a secret, confided, as it were, to the discretion which is very properly expected from one of my profession.

REPORTS.

R E P O R T S.

*Patients entered on Tuesday August 11,
1772.*

SStephen ——— aged 19 years, infected seven months ago, had at first a gonorrhœa, which continued 12 days. When this stopt he exposed himself again to infection. He had then a phymosis, with a bubo which still subsists with much induration; together with a large deep chancre which extends to the corona glandis.

Louis

Louis ——— 21 years of age, had a gonorrhœa nine months ago, which discharged during a month, and for which he took no medicine. Some time afterwards he had blotches on different parts of his body, of which there remain only a few about the scrotum.

During four months after the suppression of the gonorrhœa, he took some kind of pills, to the amount of ten a day, and ptisans, which purged him, and occasioned violent colic. Notwithstanding these remedies, the maxillary glands swelled; on one side of the face they suppurated, and on the other, there is a sensible fluctuation.

He has likewise excoriations on the glans penis, and complains of nocturnal pains.

Joseph ——— aged 40 years, had chancres and a bubo twelve years ago, of which he was cured. Four years ago, he had a gonorrhœa and chancres, for which he

he took medicines, &c. and thought himself cured.

Without having exposed himself anew, he felt himself attacked with dull pains, in his right leg, which have insensibly increased of late, and there has appeared an exostosis in the lower and smaller part of the tibia. He complains of pains in his limbs, and small of his back. For 15 days past he has felt pains in his right ear, and has a purulent discharge from it. His gums are swelled. Scurvy suspected.

John Baptiste ——— 22 years of age, had four years ago, gonorrhœa with chor-dee. He passed blood, and was under no treatment. The discharge continued two years, during which time he cohabited with a woman: at length the discharge stopt without any remedy. He had blotches over the whole body, which were succeeded by a quotidian fever which lasted eight months, with swelling of the spleen and other adjacent parts. This swelling continued the same till within

within this month, since which time it has sensibly augmented, so that it now forms a very considerable tumour.

Note, that this tumor may not be venereal.

He exposed himself afresh in October last, and his gonorrhœa came on again, with warts. The discharge having stopt without remedies, he hazarded infection again. About a month ago, a bubo appeared in the left groin, with swelling of the neighbouring glands. He has likewise a considerable chancre, eroding the upper part of the glans. Sleeps but little, has pains over the whole body.

Henry ——— aged 42 years, had about ten years ago, gonorrhœa, followed by hernia humoralis. He was salivated in the Bicetre hospital.

This patient was sent back to the Bicetre, on account of a disorder of the urethra, which required bougies.

Peter

Peter John ——— aged 22 years, had a chancre six months ago, with paraphymosis, which destroyed part of the prepuce. This disease has been done nothing for. Five months ago he had a bubo, which has suppurated repeatedly, and still discharges, and is attended with indurations. These indurations are now the only symptoms.

Peter D ——— aged 20 years, had a gonorrhœa two years ago, for which nothing was done. The discharge insensibly diminished till he renewed the infection, and had chancres with gonorrhœa. Soon afterwards the glands of the right groin swelled, and formed a bubo which came to suppuration about 15 days ago. The running from the urethra still continues. He has a little chancre on the prepuce; and pains in all his limbs, and particularly acute ones in his right leg, a little below his knee. The pains were more violent before the bubo suppurated. Has nocturnal pains of the head.

Henry A—— aged 20 years, was attacked six weeks ago with phymosis, chancres that suppurated much, and swelling of the glands of the groin, has pains in all his limbs.

Luke B—— aged 25 years, has been ill two years and a half with gonorrhœa. which has afforded a constant discharge, has had swelling in the groin. He has taken pills and ptisans, which occasioned violent pains in the stomach, together with nausea. After taking these remedies six weeks, he had constant vomiting. He was then put upon another course during two months. The gonorrhœa being then suppressed, he was attacked with hernia humoralis, and has since had chancres and phymosis, which still subsist, together with pains in his limbs, and particularly in his loins, so as to be unable to continue long in bed.

Signed: Devernage.
 Belletre
 Moreau

Munier

Munier
 Vicq. D'Azyr
 Dufouarre
 Mac Mahon
 Bercher
 Silvy
 Maloet
 Sabatier
 Dumangin
 Majault.

Louis D—— aged 23 years, came in September 4th, 1772, has been ill five months with a considerable bubo in the left groin, which still subsists, and has suppurated a little. The patient complains of pains in his limbs which hinder his working.

Michael D—— aged 42 years, came in the 4th September 1772. Has been infected four years and a half. Had at first a chancre of the size of a shilling, on the prepuce, for which nothing was done. Since that time till about four months ago, he had now and then an

eruption on the skin, which then became so general, as to cover the greatest part of his body. These eruptions rose upon the skin and discharged matter. He has now one very large one of this sort in his right ear, another large and deep one in the left nostril, several other large ones on his face, arms, breast, and abdomen, besides an infinite number of smaller ones.

Since the eruption of these pustules, he has had much pain in his arms, legs, and loins, with a tremor of all his limbs, so as to have been unable to walk. Violent nocturnal pains, and almost total want of sleep.

John G———26 years of age, came in the 4th of September 1772. Had a gonorrhœa with chordees, about a year ago, which was treated during three months by the sublimate, frictions and mercurial pills when the discharge stopped. The patient exposed himself to infection, and contracted a fresh gonorrhœa

orrhœa which continued only a few days, and he passed some blood from the urethra. In February last, he contracted another which lasted six weeks, and was likewise treated with sublimate. The discharge then stopped, and there appeared chancres on the prepuce which lasted four months. These had no sooner disappeared than the patient exposed himself anew, and soon afterwards had two buboes, which degenerated into ill conditioned ulcers. These, together with a running from the urethra, which, for this month past has been very abundant, constitute his present complaints. He complains of pains in all his limbs. These pains increase during the night, and prevent his sleeping.

Signed. Du Vernage

Munier

Silvy

Hofly

Maloet

Mac Mahon

Du

Du Fouarre
 Vicq. D'Azyr
 Dumangin.

Francis Marin H——— aged 24 years, has been ill two months, had two years and a half ago, a gonorrhœa with chordee, which was succeeded by hernia humoralis. There remain even now, a swelling of the testicles, and induration of the inguinal glands. He has likewise a phymosis, with many chancres.

Peter Sto——— aged 24 years, had three years ago, a gonorrhœa, which discharged during six months, and stopped of itself, but has occasionally disappeared. He has now a phymosis, a wart at the extremity of the glans, and a large and hard bubo in his right groin.

John Vin——— aged 23 years, about five years ago had a gonorrhœa, which he cured himself. Three years ago received a fresh infection, and had a bubo, which suppurated, and he then took medicines.

Some-

Sometime afterwards, he was attacked with pains in his leg, on the same side. A year ago, he had a fresh gonorrhœa, which lasted four months without being treated, and he afterwards had chancres, and a bubo in his left groin.

Has a great many small chancres at the end of the prepuce, which is contracted and swelled. Small blotches over his whole body.

Jacques Joachim L——, aged 26 years, has been ill eighteen months. At first he had suppuration in the rectum, and eruptions about the anus, which continued during six months. Other eruptions appeared on his head, and about the parts of generation, and then warts on the glans penis.

He has now large blotches on his front, neck, and chin; and ulcers under the anus, one of which is very large and deep.

Signed,

Signed. De Vernage
 Dufouarre
 Vicq. D'Azyr
 Silvy
 Bercher
 Munier
 Moreau
 Hofty
 Sabatier
 Macmahon
 Pipelet
 Maloet
 Majault

Patients admitted 23d of October, 1772.

Peter Bo—— aged 20 years, has been ill a year. Had at first a gonorrhœa which continued six months. This was succeeded by a great number of warts on the prepuce and glans penis. He has now a swelling of the glands in the left groin, and pains in his limbs.

William G—— aged 18 years, was infected two years ago, and had a gonorrhœa
 which

which has stopped several times: but discharges now, and for these last four months he has had two chancres on the extreme part of the prepuce, which is much swelled. Has a bubo in the right, and swelling of the glands in the left groin. Complains of pains in his limbs, and want of sleep.

Louis M—— 31 years of age, has been ill five months with phymosis, and indurations within the prepuce, where there are, probably, either chancres or warts. The glands of the groin are swelled, and he has an infinite number of blotches in his face, and here and there on other parts of his body.

Peter Cornelius W—— 18 years of age, had a gonorrhœa two years ago. For two months past he has had a large and very hard bubo in the right groin. Pains in his limbs.

John Gabriel B—— 24 years of age, two years ago had gonorrhœa, chancres and bubos. Two months ago there appeared a chancre on the prepuce near the frænum, and a considerable bubo in the left groin.

John Vo—— 19 years of age, has been ill fifteen months. Had at first chancres, warts, and bubos. Six months ago, there appeared chancres around the glans penis, which are much diminished, and are now actually only simple excoriations. For two months past has had large and numerous condylomata, between the thighs, and around the anus.

Charles —— 21 years of age, has been infected three years, and has had gonorrhœa, chancres, and two small bubos. Complains of difficulty in making water, and of pains in his limbs.

Signed.

Signed. De Vernage
 Moreau
 Belletre
 Hofty
 Dufouarre.
 Bercher
 Sabatier
 Silvy
 Mac Mahon
 Maloet
 Le Thieullier
 Pipelet
 Vicq. D'Azyr
 Henry de Buffy
 Chambon.

The following note was written by M.
 Sabatier.

“ The six first were exceedingly ill.”

PATIENTS

PATIENTS DISCHARGED

the 23d of September.

Stephen ——— 19 years, &c. (c).

Luke B——— aged 25 years, &c.

After having examined the above two patients, we attest their being cured.

Signed. De Vernage

Dufouarre

Bercher

Maloet

Pipelet

Vicq. D'Azyr

Silvy

Moreau

Mac Mahon

Majault

Munier

ThierrydeBuffy

Hofly

Dumangin

Sabatier

(c) In the original, each patients case is here again transcribed verbatim from the report at admission. It was not thought necessary to do this in the translation.

Oc-

October 21.

Joseph ——— aged 40 years.

Peter John ——— aged 22 years.

Henry A——— aged 20 years, &c.

Michael D——— aged 42 years, &c.

Francis Marin H——— aged 24 years.

John G——— aged 26 years, &c.

Louis D——— aged 23 years.

James Joachim L——— aged 26
years. &c.

We the under written, certify, that having visited the above patients, we find no longer any of the symptoms that had been remarked in each of them, at their admission: at Paris this 21st of October 1772.

Signed. De Vernage
Moreau
Hofly
Bercher
Maloet,
Du Fouarre
Le Thieullier

Vicq.

Vicq. Azyr
 Sabatier
 Mac Mahon
 Silvy
 Belleteste
 Chambon
 Thierry de Buffy
 Pipelet.

26th of December 1772.

Peter Cornelius W—— aged 18 years.
 John Vo—— aged 19 years.
 Louis B——— aged 21 years.
 John Baptiste —— aged 22 years.
 Charles —— aged 21 years.
 Louis M——— aged 31 years.
 John Gabriel B—— aged 24 years.
 William G—— aged 18 years,
 Peter Bo—— aged 20 years.
 John Vin—— aged 23 years.
 Peter Sto——— aged 24 years.

We

We the underwritten, having examined the above patients, and finding that all their symptoms have disappeared, do certify them to be cured. At Paris this 17th of December 1772.

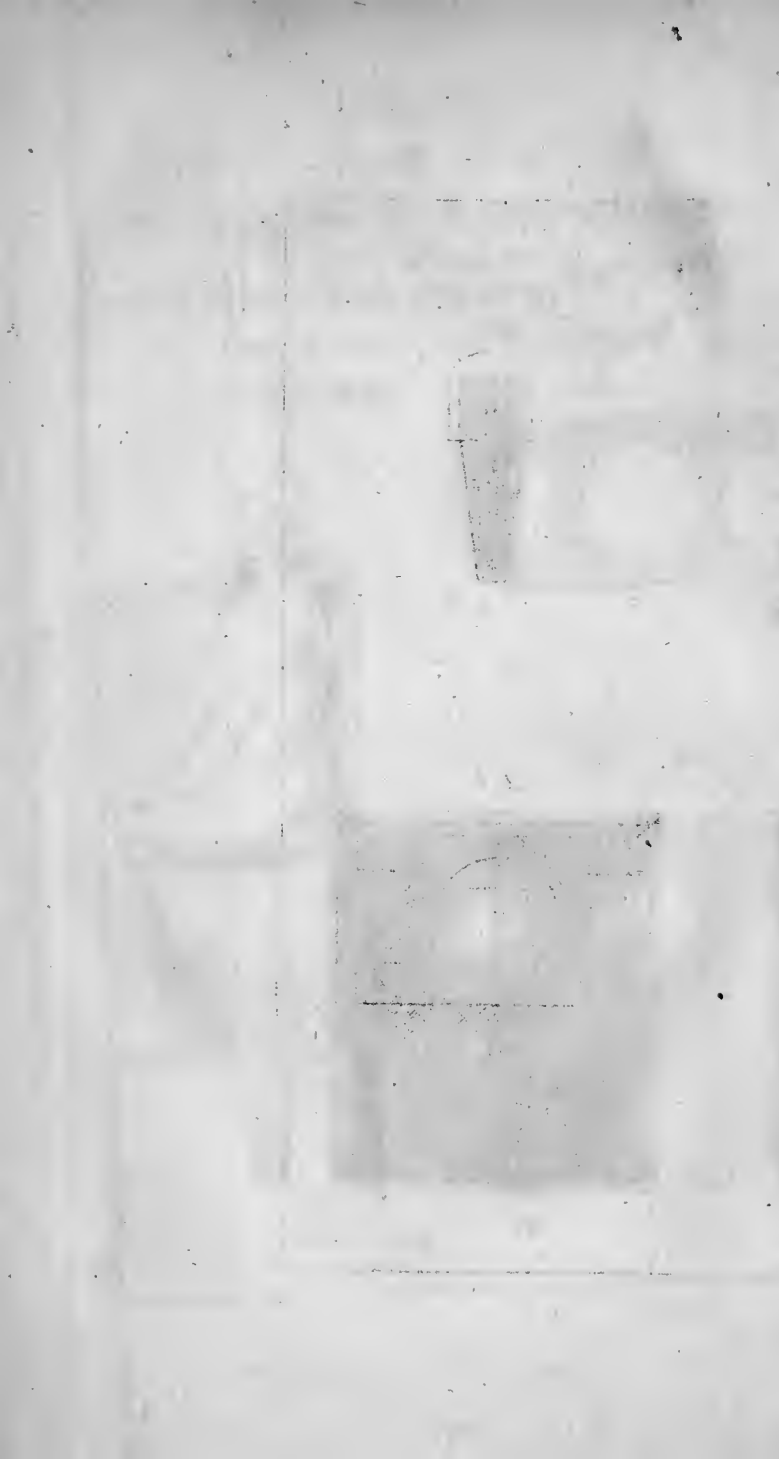
signed. DeVernage
Belletete
Bercher
Mac Mahon
Dumangin
Hofly
Maloet
Le Thieullier
Vicq. D'Azyr
ThierrydeBuffy
Silvy.

Peter D——— aged 22 years.

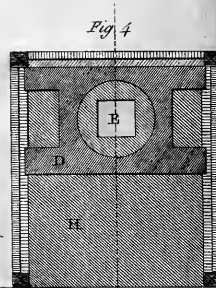
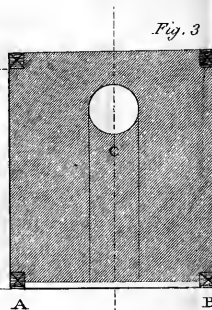
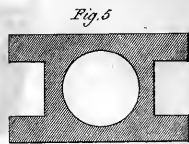
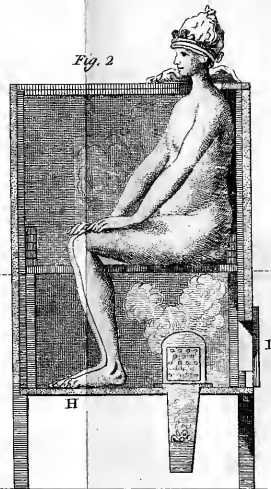
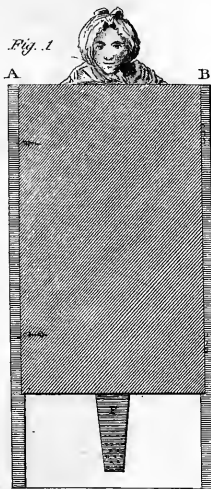
Is relieved from the principal symptoms of general lues, but with respect to some remains of local disease, there are some

some doubts of his being perfectly
cured.

Signed. Hosty
Maloet
Bercher
Vicq. D'Azyr
Silvy.



Representation of the Fumigating Box



Scale of Six Feet.

EXPLANATION

OF THE

PLATES.

PLATE I.

Fig. 1. **A.** B. Elevation of the fumigating box.
F. The furnace.

Fig. 2. Internal view of the same,
I. The sliding door, through which the fumigating powder is introduced.

U **D.** The

D. The seat.

H. The platform of the box.

Fig. 3. The upper part of the box.

C. the sliding-board for the passage of the neck.

Fig. 4. D. The seat, see fig. 2. D.

E. The hole at the bottom of the box for the admission of the furnace,

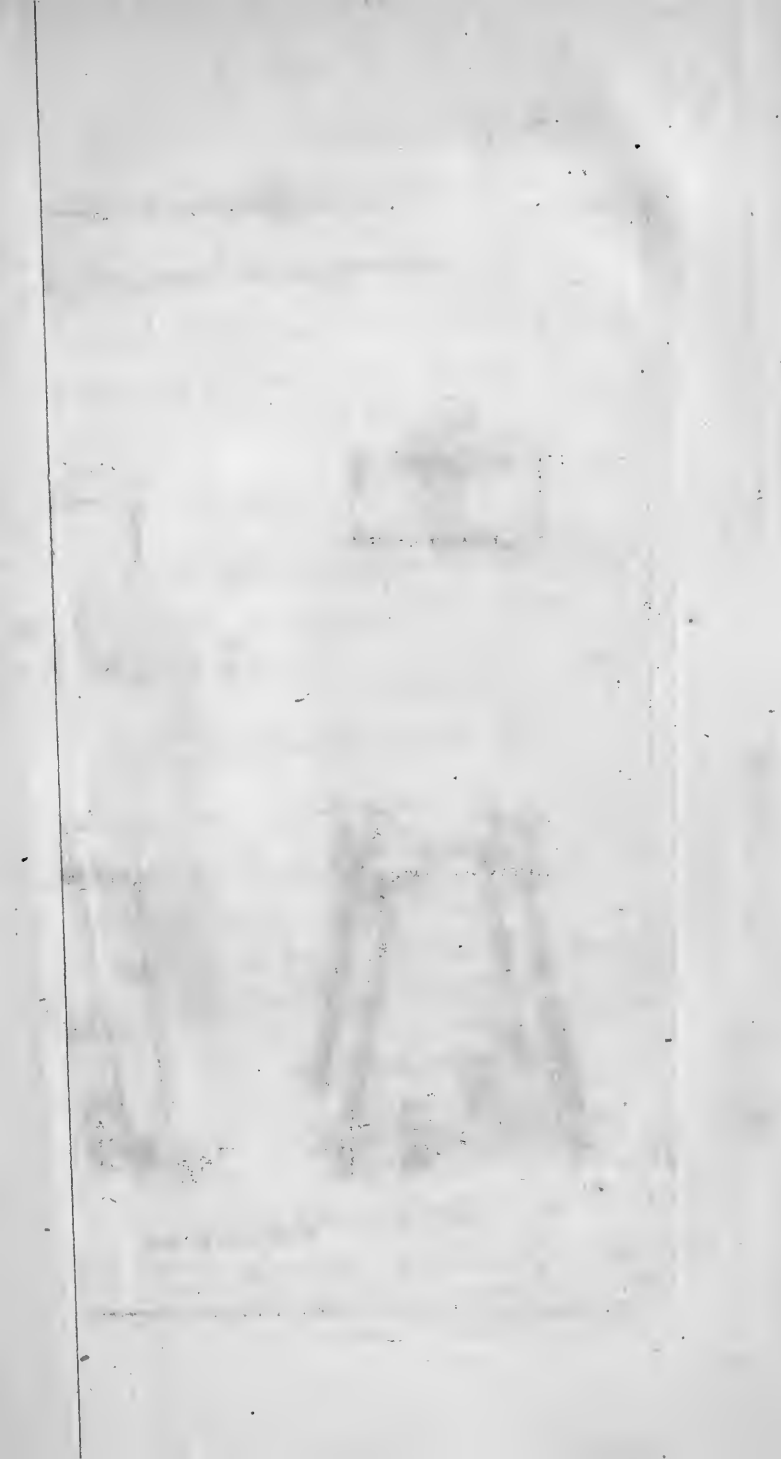
H. The bottom of the box.

Fig. 5. The seat D, detached from the box, which may be placed higher or lower as occasion may require, by means of the grooves, see fig. 2. D,

Fig. 6. F. The furnace.

G. The lid of the furnace.

In



Tressels for local fumigation.

Fig. 4



Fig. 5



Fig. 6



Fig. 1

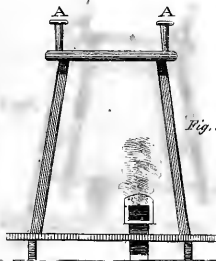


Fig. 2

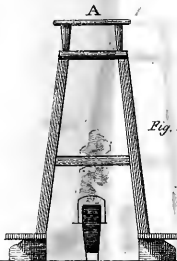


Fig. 3

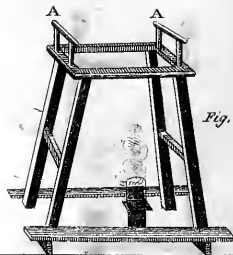
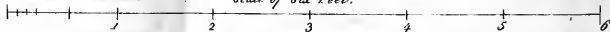


Fig. 7



Scale of Six Feet.



In using this furnace, it will be necessary to use only very small coals, and to the height of not more than two inches. If the heat is too great, the lid of the furnace may be shut.

P L A T E II.

Tressels for local Fumigation, especially for the Parts of Generation in either Sex.

Fig. 1. Elevation of the tressel.

2. Lateral elevation.

3. Perspective elevation.

4. The top of the tressel.

5. Elevation of the moveable supporters A. A.

U 2

These

These supporters will, in women, serve to support the petticoats ; or in men, whatever is made use of to confine the vapor.

6. The furnace.
7. Cylinder for fumigating the head, or the lungs. The holes at the bottom of the cylinder, are to admit air to the furnace.

When the patients have their head placed over the cylinder, it will be necessary to cover them.

P L A T E I I I .

View of the Chemical Apparatus.

Fig. 1. The furnace.

A. The ash-hole.

B. The door of the fire-place.

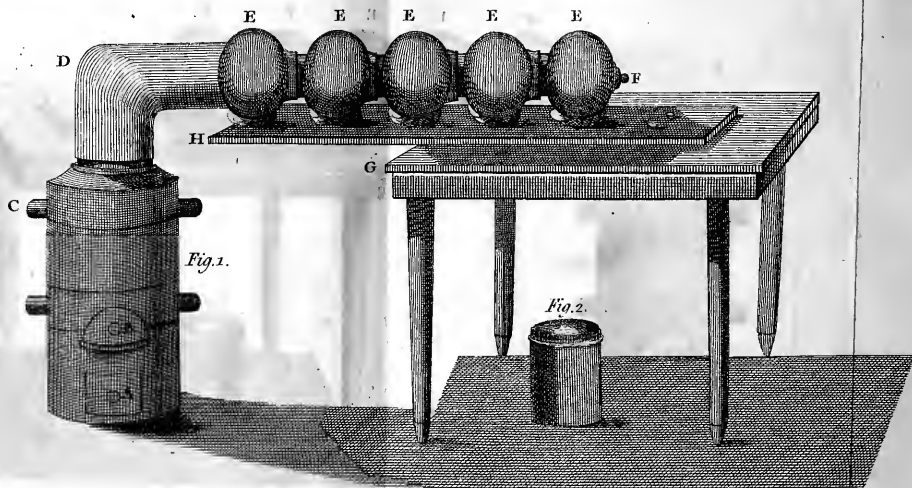
C.

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View of the Chymical Apparatus



- C. The neck of the furnace.
 - D. The tube.
 - E. E. E. E. E. Five aludels.
 - F. Cover, with a hole in the middle.
 - G. Table to support the apparatus.
 - H. Additional board, secured by two screws.
-

Fig. 2. A cylindrical cucurbit, resembling that which is placed in the furnace, and to which the tube is adapted.

F I N I S.

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